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Link(s) to article on publisher's website:

<http://dx.doi.org/doi:10.21954/ou.ro.0000f07c>

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**“E-LEARNING: DESIGNING TO
IMPROVE LEARNER EXPERIENCES”**

**Doctorate of Education in
Learning Technologies**

SUBMITTED ON 3RD JUNE 2013

Date of Submission: 3 June 2013

Date of Award: 22 April 2014

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ACKNOWLEDGEMENTS

There are many so worthy of my thanks and gratitude:

- My family and friends showed great patience and long suffering as their support and encouragement provided inspiration and much needed motivation.
- I would like to thank the GMIT for funding the research and providing the required support.
- I wish to thank all the staff of the Open University for their professional support. In particular June, your patient support, quick responses and ultimate professionalism impacted so positively on my experiences.
- I wish to thank Professor Grainne Conole. Your knowledgeable and supportive supervision at the early stages of the research were essential to me in finding focus and developing a vision for the completed body of work.
- I would like to thank Alan Pearce. Alan, your detailed critical reviews impacted so positively on the quality of the final thesis.
- I wish to thank my supervisor, Dr Christopher Jones. Chris, your knowledge and sharp mind helped forge the study into a cohesive and worthwhile body of work. However, your patience and kind words of encouragement were equally invaluable.
- I wish to thank my dear wife and best friend Kathleen. You were with me every step of the way sharing my emotions, frustrations and joys. Your belief in me, your support and companionship meant far more than words can express – Thank you.

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Abstract

This three phase 'action research' based study set out to improve the experience of e-learners. The first two phases resulted in a set of recommendations with the potential to improve the experiences of e-learners. The recommendations resulted in three sets of implementations aimed at providing an active and salient leadership, developing an active learning community, and communicating module element clearly and precisely. Phase three involved implementing the recommendations in a module delivered to 20 post-graduate learners in blended mode and evaluating the impact on their learning experiences. Water-Adams (2006) suggests action and context are central to action research which is a practical approach to professional inquiry. This research addressed a real life, in context problem on a collaborative basis with learners. The approach was interpretative, phenomenological, idiographic and inductive. The primary research tool was the interview used to develop an understanding of learner experiences at a deep and individual level. An unstructured interview was used to evaluate learner experiences in phase one. Themes were abstracted from phase one interviews and used to inform semi-structured interviews which were conducted in phases two and three. A questionnaire was also used in phase three to evaluate the general class experience. The findings suggested that the implementations were successful. Learners perceived an active and salient leadership, felt they benefitted as part of an active learning community and articulated appreciation for clear communications of module elements. However, the nature of communications seemed to play an important role as learners responded very positively to personalised communications such as texting and audio feedback from the tutor. The results highlight the vital role of communications in an e-learning environment, in particular communications which give evidence of an active, approachable and understanding tutor presence, and connects cognitively and emotionally with learners.

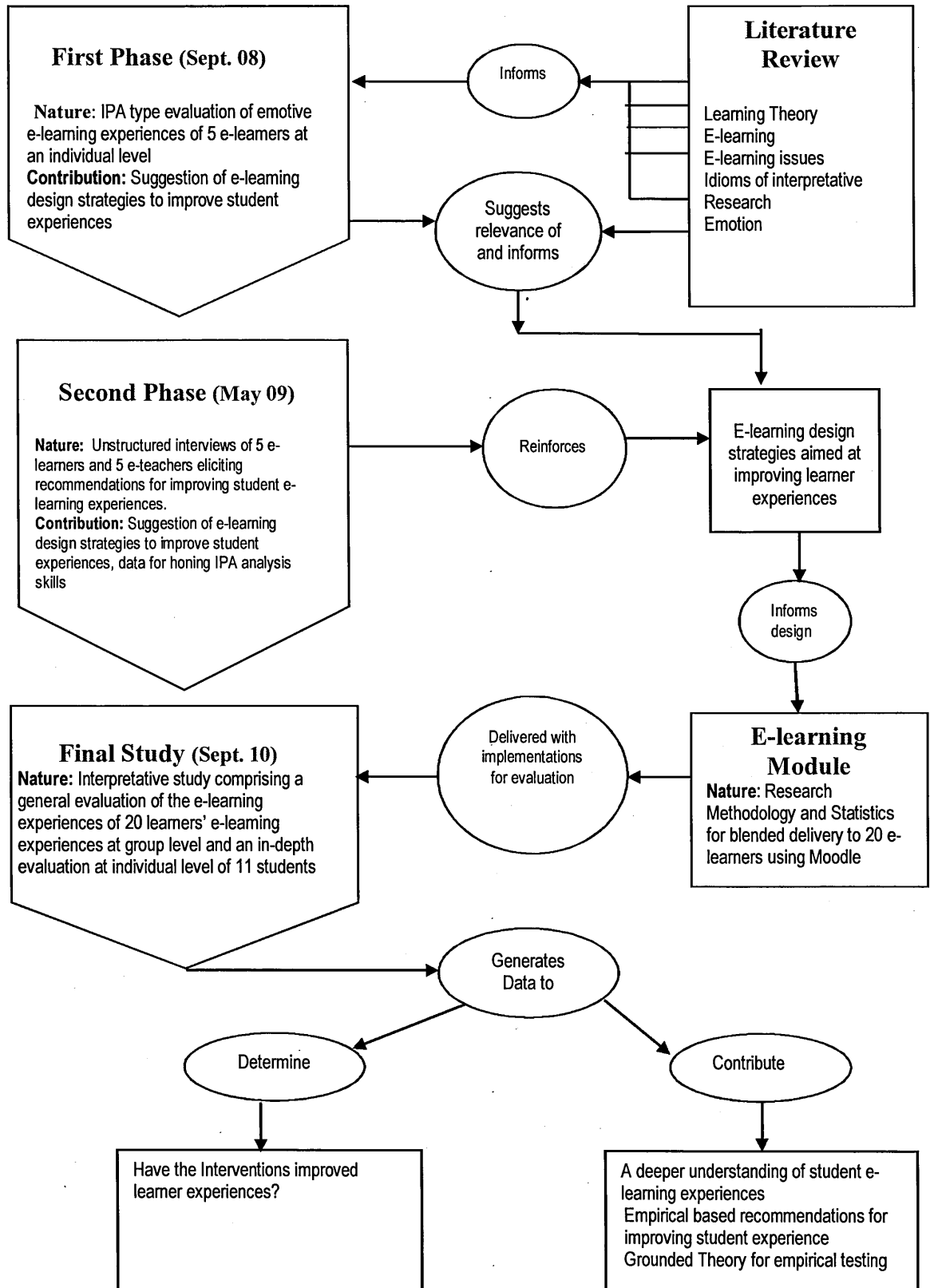
1. Introduction to the Study

1.1 The Phases of the Study

Figure 1.1 below presents a graphical overview of this study which was conducted in three phases. The first phase study, which was also the EdD Pilot study, was conducted in September 2008. This study involved evaluating the experience of five e-learners, all in the first semester of their degree year, all studying information technology and all participating in the EVENE project. Participation for each learner involved undertaking a five European Credit Transfer System (ECTS) module from a European partner institution involved with the Galway mayo Institute of Technology (GMIT) in a virtual mobility programme called EVENE. Modules were delivered in pure e-learning mode i.e. all module content was delivered electronically and all communications were conducted electronically through discussion forums or e-mail facilitated by the virtual learning platform Moodle. The experiences of participating e-learners were explored, evaluated and used to develop a set of recommendations for improving the experience of e-learners. The phase two study, conducted in May 2009, involved eliciting the opinions of four learners, with previous e-learning experience, and four tutors, with previous e-tutoring experience, on the recommendations ensuing from the first phase study and any other issues they deemed important in improving the experiences of e-learners. The eight participants undertook a semi-structured interview in which they were asked to comment on recommendations drawn from the first phase study, for example, on the importance of 'leadership' in an e-learning environment. E-learners and e-tutors were also asked to comment on any issues they felt were important to the success of e-learning. The consolidated findings of the first two phases resulted in a series of recommendations which were implemented in a course module 'Research Methodology and Statistics' (Appendix

A) a five ECTS credit module, delivered by me to a class of 20 students undertaking a Master's degree in 'Business Innovation and Entrepreneurship'.

Figure 1.1: A Schematic of the Research



The module, delivered in blended mode consisted of 52 hours online activities and 26 hours of face to face sessions. On completion of the module the impact of the implementations on the experience of learners was evaluated. This evaluation comprised the third and final phase of the research which commenced in September 2010. The three phases of this research are discussed further in chapter three.

1.2 The Purpose of the Study

This study was inspired by an experience I had while involved in a virtual mobility project. This project, called the Erasmus Virtual Economics and Management Studies (EVENE) project involved the sharing of modules across six European colleges including the Galway Mayo Institute of Technology (GMIT) where I teach. As part of the project five learners whom I was tutoring availed themselves of accredited modules from partner institutions across Europe. From the outset, the participating learners had communications difficulties with module leaders, problems with accessing module materials and found little evidence of being involved in an active learning community. A post module evaluation of the experience of learners, which constituted the first phase of this three phase research, suggested that e-learners can have very negative learning experiences. The first phase of this research highlighted the negative emotions learners can experience, primarily feelings of isolation, frustration and de-motivation. Furthermore, it suggested the importance of reviewing my own practice in terms of ensuring that those whom I was tutoring had no such experiences. My professional practice was in transition from the traditional classroom mode of delivery to a greater reliance on information technology (IT) to engage learners. This transition needed to be informed by a better understanding of its impact on e-learner experiences to ensure that learner motivation, engagement and productivity was at least maintained if not improved. The need to ensure that learner experiences were improved beyond those who engaged in the first phase of the study gave this research its

purpose - designing to improve learner experiences. In order to achieve this it was important to explore the experience of learners. Beaudoin, Kurtz and Eden (2009) argue that the e-learning literature tends to focus on optimising the features of e-learning platforms from the tutor's perspective rather than developing an understanding of the experiences of e-learners at an individual level. The rationale for this study was based on the need to improve e-learner experiences by addressing issues which e-learners themselves identified as impacting on them. An exploration of e-learner experiences was fundamental to achieving this.

1.3 Overview of the Research

This research was conducted iteratively and comprised of three phases, each involving a study of e-learning experiences i.e. experiences achieved in an e-learning or blended learning environment. E-learning implies the provision of education electronically (Kurtus, 2000, p.1) and in the case of this study refers to online learning, where the electronic provision of education is achieved over the Internet (Collins, 2002). E-learning may be supplemented by traditional, work based, face to face learning communications between tutor and learner, a mode of delivery referred to as blended learning (MacLeod, 2004).

1.4 Exploring E-Learner Experiences

An initial review of the literature indicated that there was a large body of research which looked at learner experiences in general i.e. studies which produced findings which could be generalised to the overall body of students. For example, Richardson (2006) examined the motives and attitudes of learners undertaking e-learning courses and Gilbert, Morton and Rowley (2007) drew on in-depth qualitative comments from learners to develop an

overall perspective of their experiences. Sharpe and Benfield (2005) reviewed in excess of 83 e-learning studies, all published since 2000. Each of these studies collected qualitative data describing how learners engage with e-learning and identified a number of issues which emerged as having the most impact on their experiences. Of the 83 studies reviewed, only seven were characterised as expressing the individual 'learner's voice', suggesting that the remaining 76 reported on the experiences of learners in general. Mayes (2006) reported surprise at the scarcity of research which focussed on the experiences of individuals and argues that the scoping study conducted by Sharp & Benfield, (2005, p.3) provided "...a convincing case for conducting research into e-learners with a rather different focus from that revealed in the current literature on e-learning". Sharpe and Benfield (2006) identified three reasons for exploring learner experiences at an individual level. Firstly, to avoid making assumptions about learner experiences, these will inevitably be from the tutor's perspective and may be incorrect. Secondly, the spectrum of learner experiences tends to be broad and unpredictable with diverse reasons for student withdrawal from modules or non-participation in course elements. This contention was well supported in the literature, for example, Allan (2004) highlighted time management issues, Attack & Rankin (2002) identified connectivity problems with course content, and Moore & Aspden (2004) pointed to lack of clear instruction on learning tasks, an issue for learners which emerged strongly from the first phase of this study. Thirdly, learners undertaking similar modules tend to have contradictory experiences e.g. some may want more group work while others may want none at all.

The most effective method for identifying diverse issues and contradictory experiences was to give voice to learners as their experiences could not be identified by merely observing their behaviour. Sharpe and Benfield's (2005) study argued that the focus of research activity in this area was primarily on practitioners and pedagogy with little

exploration of learners' experiences in the sense of exploring them at an individual level and giving a voice to e-learners. Also, Alexander (2001, p.241) said "much of the literature on e-learning is merely a description on what the teacher could do or has done online, while the student experience of those activities goes largely undocumented". Hara and Kling (1999) also asserted that the focus of most studies was on technological rather than learning issues while Alexander and Golja (2007) took it one step further and argued that benchmarking for quality e-learning should be substantially based on the experience of e-learners.

The literature endorsed Mayes (2006) in advocating an effort to listen to the voice of individual e-learners. Creanor, Trinder, Gowan and Howells (2006) writing on aspects of the 'Learner Experience of E-learning Project' (LEX) concluded that there were several under-researched aspects of e-learning, namely, learner control, the emotional aspects of technology and designers listening to e-learners. They concluded that listening to learners would be beneficial. This is important because learners engage differently (Gilbert et al., 2007) and because, as Dippe (2006) argued, there is a need to factor in diverse learner experiences. Cook-Sather (2002, p.3) also argued for student centric design, by attending to the needs of those "most directly affected by, but least often consulted about, educational policy and practice: students". Cheol (2003), in a study which explored how successful e-learning might be fostered, referred to e-learning quality issues, such as instructional design and student empowerment and argued that learner-centred practice is necessary to improve the quality of online learning. He concluded that learners' needs and demands were perceived as being given a lower priority than other aspects of designing courses on the Internet.

Engelbrecht (2003) argued that Higher Education (HE) needed to develop an e-learning strategy which addressed the concerns of learners. He further argued that in order to

address the concerns of learners, they must first voice those concerns. The need for user centric 'design for learning' was endorsed by Hou (2001) and later Jones & Issroff (2006) recommend that e-learning technologies should be applied in a way that addresses social and affective issues. Cook, White, Sharples, Sclater, and Davis (2006, p.146) concurred and argued that e-learning technologies should be recognised as "...the human-centred design and use of technology". They also argued that priority should be given to the specific context of the learner while engaging with learning technologies. Sharpe & Benfield (2005), in highlighting the value of recognising individual differences and allowing them to impact on pedagogical design, aligned themselves with Cook et al. (2006) in recognising the uniqueness of individual learner experiences and advocating that designing for learning somehow factors these in. The arguments put forward by these authors suggests that designers should strive to achieve what Conole (2010) described as "personalisation through technology enhanced learning" and empower the learner to customise their use of e-learning technologies and to some degree construct their own e-learning experiences. Chatti, Jarke and Splecht (2010, p.76), in recognition of the failures of traditional technology, argued that "effective and efficient learning need to be personalised and learner controlled". In recent years, many technologies bear witness to the move from economies of scale to economies of scope, where individuals configure their own product, for example, in the auto industry where the purchaser can customise the product, and thus, to some degree design their own driving experience. However, in light of the lack in understanding of learner experiences, and the knowledge that such experiences can be diverse and contradictory by nature, the task of designing for such contextual flexibility in e-learning is daunting and requires substantial and informed commitment from course designers, tutors and learners. The rationalisation for this study was the importance of contributing to the body of knowledge on individual learner experiences to help better inform that required commitment.

1.5 Improving e-learner experiences

The literature review provided a convincing rationale for attempting to improve learner experiences in a measured way i.e. to take deliberate empirically supported actions and explore their impact on learners. In addition, the first phase of the study led to a list of design strategies with the potential to improve learner experiences. The literature review and the second phase study interviews with e-learners and e-tutors also helped to moderate and consolidate these strategies, the implementation of which were aimed at achieving the primary objective of this research, to improve learner experiences. For example, several learners involved in the first phase of the study reported feeling a sense of isolation. Hentea et al. (2003) identified these problems as 'lack of interaction' and 'social isolation' and argued that they are major factor in unsuccessful learning. They further suggested that e-learning tools, such as video conferencing, be applied to alleviate problems of this nature. Suggestions such as this were considered in light of the findings of the first and second phases of the study with a view to improving learner experiences.

1.6 The Research Objectives

The primary objective of this research was:

- To improve the experience of e-learners.

The following secondary objectives were aimed at this:

- To develop a set of empirically based recommendations with the potential to improve the experience of learners.
- To implement the recommendations in a blended learning environment
- To evaluate the experience of learners and determine if the implementations improved their learning experience.

The following section outlines the contribution of this study to educational research.

1.7 Contribution to Educational Research

The primary contribution of this research is a demonstration of the value of listening to the voice of learners at a deep and individual level. Section 1.3 has argued that an imbalance existed in favour of general studies which are of limited use because the diversity and contradictory elements of learners' experiences are unlikely to be highlighted by such studies. This study also highlights the value of exploring the combined cognitive/affective domain of learner experiences because cognition and emotion are intertwined and therefore do not manifest themselves as individual entities for exploration. Section 1.3 has also argued that while a substantial body of research focused on what the teacher did online, the impact on learners remains undocumented. This study reports on the impact of specific online implementations on the experiences of learners, from the learners perspective, a perspective vitally important but least explored. Finally, this research highlights the value of practitioner led research, valuable because the practitioner has the best understanding of the historic background and continuity of his or her teaching domain. This is perhaps why there is more to gain from reflecting on one's own practice than reading accounts of the experiences of others.

1.8 The structure of the Thesis

Chapter two presents a review of the literature. The focus is on developing a better understanding of learner experiences. Core topics such as learning theory and e-learning tools and technologies are discussed. Chapter three presents an overview of the first two phases of the study and traces the development of the actions to be implemented in the phase three study. Chapter four presents a discussion on my ontological and epistemological beliefs and outlines a plan consistent with them and aimed at achieving the research objectives. Chapter five presents the analysis of quantitative and qualitative data as they comprise the final phase study findings, discussed in Chapter six. Chapter seven

presents a summary and conclusions while Chapter eight outlines my journey through this project, my experiences and emotions. My professional practice has been profoundly impacted upon. With self-actualisation, increased professional awareness, improved knowledge and understanding, has also come burden, frustration and joy.

1.9 Summary and Conclusions

Chapter one has provided an overview of the research and its three phases. The first phase findings clearly illustrated that it is possible for e-learners to have very negative learning experiences. These findings informed the second phase which resulted in a series of final phase implementations aimed at improving learner experiences. This research has highlighted the value of practice led research as a mechanism for improving the experiences of learners. A lack of understanding of the experiences of learners as they engage with e-learning technologies at an individual level strongly suggested the need for efforts to understand and improve learner experiences. The following chapter presents a review of the literature in an effort to inform this need.

2. The Literature Review

2.1 Introduction to the Literature review

In addition to defining key terms and concepts, the purpose of this literature review was to frame the research in the context of current knowledge and establish the study on a solid theoretical basis. This involved presenting the current body of knowledge with a particular focus on highlighting the deficit addressed by this study. This located the research in a context which facilitates assessment of its broader contribution. This research, aimed at improving the experiences of e-learners, required an understanding of the literature and the major concepts within which the research was bound: emotion, cognition, student motivation, learning and e-learning, and what was already known about learner experiences. The literature review proceeds as follows: Section 2.2 discusses learning theory with a focus on the learner's approach to learning. This is important because the research aimed to impact positively on learning experiences by applying intervention in an e-learning environment. These interventions were aimed at stimulating learner motivation and encouraging them to adopt an approach to learning which offers the potential to achieve a positive learning experience. Section 2.3 discusses prominent approaches to the delivery of learning, important because I needed to ensure interventions were implemented in a manner consistent with my preferred pedagogic approach to the delivery of learning. Section 2.4 presents a discussion on the nature of e-learning and blended learning. This is important because the final phase module was delivered in blended learning mode. It also presents an overview of the most prominent e-learning technologies and tools, important because such tools were the implementation mechanisms. Section 2.5 focuses on e-learning issues, in particular issues relating to pedagogical quality and e-learner experiences. An understanding of e-learning issues was important as the implementations were aimed at improving e-learners experience by impacting positively on them. Planned

interventions needed to be reconciled with the literature and their justification based on their potential to address major e-learning issues and support e-learners in completing complex learning tasks. Section 2.6 summarises the contribution of the literature review to the study. Finally section 2.7 presents the research question, a question addressed by the remaining chapters in the thesis.

2.2 Learning Theory

2.2.1 Overview

Skinner (1950, p.3) argued that “...what happens when an organism learns is not an easy question” and De Heuwer et al. (2013, p.1) that there was no general agreement on what learning is. However, Webster’s dictionary defines learning as ‘the act or experience of one that learns; knowledge of skill acquired by instruction or study; modification of a behavioural tendency by experience’. Lachman (1997, p.477) argued that most definitions presented in the literature are similar in suggesting that learning refers to “...a relatively permanent change in behaviour as a result of practice or experience”. De Heuer et al. (2013) noted that many researchers have problems with describing the essence of learning as a change in behaviour, primarily because changes in behaviour are not sufficient or necessary in affirming the occurrence of learning. Lachman (1997) argued that learning results in a change in stimulus effectiveness rather than changes in behaviour and that changes in behaviour are the result of learning rather than its essence. He proposed that learning is “...the process by which a relative stable modification in stimulus-response relations is developed as a consequence of functional environmental interaction via the senses” (Lachman, 1997, p.4). The literature typical definition relating learning to experience driven changes in behaviour is useful as it highlights three elements of learning. Firstly, learning as experience or modifications to perceptions, suggesting a cognitive

process whereby meanings from experiences are moderating current experience. Secondly, learning may be described as the acquisition of knowledge of skills, suggesting learning through engagement with instruction which may or may not be instructor driven or IT mediated. Thirdly, learning may be seen as behavioural change suggesting new knowledge becomes manifest in behavioural change, for example a driver observing the consequences of a car crash may moderate his or her behaviour based on this new knowledge. However, Lachman's (1997) definition, with its focus on stimulus-response, frames this study in more coherent terms. This is because the research aims to impact positively on learning through a stimulus-response mechanism, interventions in an e-learning environment aimed at stimulating learner motivation and encouraging them to adopt an approach to learning which offers the potential to achieve a positive learning experience.

2.2.2 Learner Approaches to Learning

Based on qualitative research, Marton and Saljo (1976) first coined the terms deep and surface learning. They associated deep learning strategies as engagement with learning at a level which facilitates the process of becoming an expert, learners build upon previous knowledge and experience, new knowledge is reconciled with previous knowledge and experience through reflection, resulting in a deeper understanding and a more effective application of problem solving approaches. On the other hand, surface learning relates to the memorisation of facts without context, otherwise known as rote learning. In 1987, Biggs and Entwistle, in separate studies, identified a third approach to learning, the strategic or achieving approach. They suggested that this approach is applied in conjunction with a deep or surface approach, and argued that it is characterised by learners who are highly organised, self-regulated in their approaches to learning, and are effective at study organisation and time management for example. Their research suggests that such learners are motivated by the intention to excel and achieve high grades.

Marton and Saljo (1976) suggested caution in attributing an approach, whether surface or deep, to the individual learner. They emphasised that the applied approach, whether surface or deep is not a personality trait. It describes the way a learner currently learns and is based on the learner's perception of the specific task and task instruction, in other words content and context. The learner approach does however reflect levels of motivation. The University of Queensland (nd) summarise this by describing three key levels of motivation: the surface learner 'just wants a pass', the deep learner is 'excited by the learning', and the strategic or achieving learner 'wants to get good grades'. I would argue however, that in linking approaches to learning and motivation, the link can only refer to extrinsic motivation moderated by the learner's perception of circumstances. This is because a learner may deem a surface approach appropriate and may adopt it based on their perception of circumstances and with the goal of achieving higher grades. Entwistle (1991), in suggesting that the learner's approach, whether surface or deep, tends to be consistent over time, questioned the application of such flexibility by learners. He did however argue that the deep and surface balance can be altered by module design e.g. the nature of assessment procedures. Biggs (2012) concurred, emphasising the reciprocal need for student-focused strategies aimed at changing the learner's approach by changing their conceptual understanding of learning and their world view. The work of Biggs and Entwistle has impacted substantially on theory and practice. In Ireland this is witnessed by the rollout of a module called 'learning to learn' across all third level technological institutes and similar modules across the university sector. This module is aimed at developing learning skills and motivating learners towards deep learning i.e. developing a deeper level of understanding through self-monitoring and reflection. Biggs (1989) suggested a useful model for considering the teaching-learning relationship and encouraging deep learning. This model has three elements: Presage, Process and Product.

Presage suggests that the module design be appropriate to the characteristics and knowledge of learners prior to course delivery. Process refers to course delivery which should ensure the learning objectives are clear and apply good teaching practices while being aware of the adopted learning approach of learners. The final element is 'Product' which involves considering the desired learning outcomes. Marton & Saljo (1976), in commenting on the quality of learning highlighted the link between process and outcome when they argued, that if there are qualitative differences in learning outcomes, there is very probably corresponding differences in learning processes. The argument is that learners make decisions on issues such as the tutor's expectation of them and the time they need to allot to study. The sum of all such decisions reflect the adopted approach, whether surface or deep, and highlights the substantial power those responsible for module design and delivery have in encouraging deep learning. The flexibility of learner approaches and the potential of tutors to influence learners in adopting a deep approach suggest the importance of focusing on social engagements, the nature of learning environments and the social engagements within which meaningful learning occurs rather than questioning the cognitive processes involved.

2.3 Approaches to the Delivery of Learning

Barr and Tagg (1995) suggested two possible paradigms for the support of learning, what they term the 'Instruction Paradigm' and the 'Learning Paradigm'. They further argued that the instruction paradigm, reflected in the traditional lecture format, is prevalent in undergraduate education and that this defies most principles aimed at optimising the learning environment. The instruction paradigm assumes that the teacher has a well of knowledge in his or her head which can be communicated by some channel (verbally, visually, etc.) to the learner. It also equates information with knowledge, at least in the context that it is received from without rather than generated from within. The instruction

paradigm coincides with the behaviourist school of thought, influenced by Thorndike, Pavlov and Skinner, who postulated, for example, that learning is caused by external stimuli and that observable behaviour in the learner indicates whether or not learning has occurred (Mohamed, 2003, Ch. 1, p.6). Barr & Tagg (1995) argued that the learning paradigm is about constructing environments that encourage learners to inquire, discover and construct knowledge in their own heads. This is a core element of constructivist theory. Because an understanding of learning and how learning occurs is important to this study, which aims to improve learning experiences, a discussion of behaviourism, cognitivism and constructivism follows. Behaviourism was a dominant learning theory in the early days of computer assisted learning. However, cognitivism brought a focus to mental structures such as memory and reasoning and became a springboard for constructivism, which, in its many variations, dominates learning theory today (Nagowah & Nagowah, 2009; Boghossian, 2006; Mayes & de Freitas, 2001).

2.3.1 The Behaviourist Approach

Edward Thorndike (1897-1947) and John Broadus Watson (1878-1958) are considered as the founding fathers of behaviourism (Coplan, 2010). Behaviourism focuses on the study of explicit behaviours that can be observed and measured (Good & Brophy, 1990). It suggests that a response to a stimulus can be observed quantitatively to provide a measure of learning in the learner. Conole et al. (2004, p.19) described behaviourism as “learning through association and reinforcement” with a focus on “observable outcomes” and a pedagogical focus on “control and adaptive response”. Dyke, Conole, Ravenscroft, and de Freitas (2006) recognized the value of the behaviourist approach, in particular to rote learning. The significance for module designers and tutors is to provide ease of access to factual information in addition to mechanisms for assisting the memorizing process using perhaps, repetition or association. Search engines can, for example, be used to access

factual information and multiple choice quizzes used for self-assessment and reinforcement. Tools such as these can support behaviourism in contributing to higher order learning by, for example, helping to ensure that background knowledge or factual knowledge can be easily recalled by the expert.

2.3.2 The Cognitive Approach

Chomsky (1967) argued that the acceptance of behaviourism was not supported empirically, based on solid reasoning or without valid alternatives. Bruner (1966) proposed a similar perspective in arguing that learning involves cognitive structures for representing and processing information. Thus, while behaviourism assumes that learning is manifested in changes of observable behaviour, cognitivism focusses on changes to the internal state of knowledge resulting from the mind processing and rationalising information (Ally, 2004, p.18). Psychologists recognize that certain types of learning require complex processes: cognitive processes utilizing memory, thinking and reasoning (Crider et al., 1993, p.247). Mayes and de Freitas (2001, p.8), highlighted the importance of prior knowledge and the human mind and memory in processing information when they stated that “learning, as well as perception, thinking, language and reasoning became seen as the output of the individual’s attention, memory and concept formation processes.”

The cognitive approach has a focus on cognitive structures and human development and a pedagogical focus on the transmission of communications through communications, explanation, recombination, contrast, inference and problem solving (Conole et al., 2004, p.19). Cognitive theorists argue that the development of knowledge involves building new information upon existing structures through cognitive processes, learning is achieved through interpreting and constructing meaning based on existing levels of understanding (Mishra, 2002). In this sense, knowledge creation is an incremental process as it is based

on existing knowledge structures which may need to change in order to accommodate new information. Wilson and Meyers (1999) argued that knowledge or cognitive structures can be created externally to the mind of the learner and transferred to within. They suggested that those charged with pedagogic design should consider taking experts' cognitive structures and mapping them to the minds of the learners. However, this model of knowledge transfer does not recognise the subjective process of consolidating incoming information and cognitive structures with existing internal ones. The implication for those responsible for the design and delivery of e-learning is that the intended learning outcomes should be based on a natural progression from existing cognitive structures and prior knowledge. It is also important that they see their role, not merely as disseminators of information, but as facilitators of the learning process which occurs in the minds of learners in an emergent way. E-learning tools with the potential of providing transmission mechanisms for communication information and cognitive structures in an environment supportive to the learner, and in facilitating the learner to build upon existing knowledge structures. Simulations can, for example, support the cognitive approach by helping learners develop cognitive structures or mental images of processes and process outcomes.

2.3.3 The Constructivist Approach

The constructivist paradigm asserts that learners are constructors rather than receivers of knowledge. That is individuals construct their own knowledge in a contextualised and subjective manner (Boghossian, 2006). The implications are that there is no one valid definition of knowledge and that external agents, such as tutors, are facilitators of knowledge construction rather than providers of knowledge. Various constructivist theorists emphasise different aspect of constructivism. For example, Dewey and Bruner recommend that learners be driven towards discovery by their innate curiosity while Vygotsky advocated the social element of learning (Adams, 2004). Piaget focussed on how

the individual constructs knowledge by building conceptual constructs in memory and learning through reading listening and exploration of the environment (Smith & Reed, 2010, p.331). Oliver, (2000, p.3) suggested that the strength of constructivism is in its focus on learning as a “process of personal understanding and meaning making which is active and interpretive” i.e. the learning process is about generating meaning in a context relative to the learner rather than memorizing facts. This suggests a central role for reflection, itself moderated by experience and interaction with the environment. Granville & Dison (2005) argued that the importance of reflective thinking to optimal learning is a matter of conventional wisdom.

Constructivism also embodies the notion that learners are building expertise, either becoming experts or improving expertise. However, this cannot be achieved by having learners memorize expert knowledge because expertise is built on existing frameworks through problem solving and feedback (JISC, 2001, p.16). Expertise is manifest in high levels of declarative and procedural knowledge, knowing what and knowing how (Dror, 2011; Williamson, 2004). This knowledge must be coupled with contextual flexibility i.e. knowing when and where. Expert understanding of a situation and thereby the expert reactive or corrective performance cannot be rule based (Dunphy & Williamson, 2004). This is a broad, albeit generic declaration of learning outcomes and has profound implications for constructivist based curricula development and for learner assessment. In particular, the design of processes aimed at developing expertise and mechanisms for evaluating the effectiveness of such processes. Tynjälä & Hakkinen (2005, p.7) highlighted the importance of integrating conceptual knowledge with practical knowledge in developing expertise. They argued that knowing how this occurs is important in order to offer better pedagogical support.

Constructivism has emerged as the dominant learning theory (Boghossian, 2006; Oliver, 2000). This learning theory, based substantially on cognitivism, also draws from behaviourism in its focus on learning by doing and the importance of feedback (Mayes & de Freitas, 2001, p.15). Tynjälä (1999) argued that the most popular constructivist themes are critical, cognitive, and social. Critical constructivists place significance on the role of collaboration and dialogue in the learner's social domain and emphasise actions for change in the learning environment (Tynjälä, 1999). While this research is aimed at producing measured changes in the learning environments, such changes are based on an evaluation of learner experiences rather than a pedagogic approach, therefore critical constructivism will not be considered further. However, a further exploration of cognitive and social constructivism is important. This is because I espouse the constructivist view that true understanding cannot be directly passed from one to another, rather it must be constructed anew using cognitive processes.

Cognitive Constructivism

Cognitive constructivists focus on the individual's knowledge construction processes and the underlying mental models and structures (Tynjälä, 1999). This process is based on internal personal negotiation using mental models and reflection to frame one's understanding and develop explanations, predictions and inferences. As cognition is situated in a personal and social context, constructivism could be expressed as a function of cognitivism and context. Knowledge is substantially an internally negotiated meaning achieved through reflection, experience and exploration of the environment. Mohamed (2005) argued that learning is achieved by observation, processing, and the interpretation of information which is based on the learner's personal reality. According to Dyke et al. (2006) "(the) emphasis on learner-centred and activity-oriented cognitive processes for knowledge assimilation, creation and construction are typical features of the constructivist paradigm" (Dyke et al., 2006, p.6).

Social Constructivism

Social constructivism involves a similar process to cognitive constructivism, however, it is based on social negotiation where reality is shared and meaning is negotiated (Mergel, 1998). Dyke et al. (2004) proposed reflection, experience and engagement with others as dimensions of the central tenets of learning. Lave and Wenger (1991, p.29) highlighted the 'situated' nature of learning in a process they call Legitimate Peripheral Participation. This label is appropriate for two reasons. Firstly, Lave and Wenger (1991, p.35) described Legitimate Peripheral Participation as a social practice which includes learning as a fundamental component of the practice involving learners participating with communities of practitioners while developing expertise. This involves moving from newcomers to full participation as experts within the community. Communities of Practice, an extension of Legitimate Peripheral Participation emphasises the social aspects of learning with reference to communities of practice (Wenger, 2006). Such communities share resources, discuss and reflect on experience and approaches to problem solving. Communities of Practice involve a shared body of resources, experiences, stories, tools etc. However, while the quest for learning is a precondition for membership to a Community of Practice, it is not sufficient for Legitimate Peripheral Participation which is a long term rather than a transient process as the learner moves from new-comer to a seasoned and learned expert within the community (Lave and Wenger, 1991, p.53).

These attributes highlight the complexity and diversity of considerations in theoretical and practical constructivism, and perhaps indicates why there are so many variations of the constructivist theme. There is one central tenet within this diversity, that is, that learners construct their own knowledge (Boghossian, 2006, p.1) either individually (individual constructivism) or socially (social constructivism). From a practical e-learning perspective,

however, what is important is that all variations posit that meaningful knowledge is constructed rather than transferred.

The implication for this study is that the implementations are underpinned by constructivist principles and by supporting knowledge construction where information processing occurs at a deep rather than a surface level. This suggests engaging learners' cognitive faculty in exploration, discovery, and engagement with learning resources. The social context of learning must also be recognised by facilitating task based engagement with faculty members and learners to encourage the sharing of expertise and the negotiation of meaning. This indicates the use of e-learning tools such as discussion fora to facilitate critical engagement with learning materials across the faculty.

2.4 E-Learning

This research aimed to improve the experience of learners in an environment where learning was delivered both face to face in the traditional classroom and electronically over networks such as the Local Area Network at the GMIT and the Internet. The discussion which follows on e-learning, blended learning and online learning tools and technologies is aimed at informing this process.

2.4.1 e-Learning

E-Learning implies the provision of education electronically, e.g. mediated by CD, DVD, or other electronic medium. Kurtus defines it as:

“...a form of instructional authoring that can be delivered through a CDROM, over the LAN, or on the Internet. It includes Computer-Based

Training (CBT), Electronic Performance Support Systems (EPSS) and Web-Based Training (WBT), as well as distance learning.”

(2000, p.1)

Online learning is a term applied to the provision of education over the Internet (Canning and Stager, 2003). Online learning is e-learning where the primary medium of communications between tutor and learner is a shared network (Collins, 2002). The shared network for distance online learning is the Internet. That is, online learning is e-learning through the medium of the Internet and a subcomponent of the latter. A subcomponent of online learning is Web-based learning (WBL), defined by Van Greunen and Wessen (2004, p.2) as:

“...any form of learning that is partly or fully based on material, applications or communications that is delivered over the World Wide Web (WWW)”.

As the Web is just one tool of the Internet, WBL is strictly a subcomponent of online learning and suggests a Web browser interface, or Web browser mediated delivery. Ullery (2002, p.149) described online teaching and learning as:

“...educational instruction that is enhanced by the use of interactive multimedia authoring and production software, personal computers, Web and/or intranets and learning management systems...”

Educational instruction may be achieved with total reliance on electronic forms of communications or may be augmented with the richness of face to face communications between tutor and learners.

2.4.2 Blended Learning

The enhancement of educational instruction by the use electronic communications may be achieved to various degrees. The term blended learning refers to learning which is delivered by combining educational instruction in the traditional face to face classroom and digital technology

Busaidi (2013) argued that e-Learning implies a total dependence on digital technology and a network such as the Internet to deliver learning. He further argued that many third level colleges are integrating e-learning with traditional education to give greater value to learners. Rovai and Jordan (2004, p. 1) defined blended learning as “a hybrid of classroom and online learning that includes some of the conveniences of online courses without the complete loss of face-to-face contact.” Thus learners experience the richness of face to face communications and the convenience of online courses such as access to learning materials electronically or over the internet without space or time restrictions. Lin and Wang (2011) suggested that the value of the virtual element of blended delivery is in the assistance e-learning provides in achieving learning tasks such as gathering, constructing and sharing information. They argued that these tasks are considered as success factors in learning environments. Gruber and Schworm (2012) argued that third level students are required to regulate and control their own learning experience and that a virtual workspace can assist with this by, for example, facilitating the exchange of documents and the integration of complex cooperative learning tasks. Rovai and Jordan (2004) conducted a comparative study between traditional learning environments, blended learning environments and e-learning environments. Their study provided evidence to suggest that a stronger sense of community is produced in blended learning courses. This they argued is

because blended learning is consistent with less focus on instruction and more on producing learning through collaboration and the social negotiation of meaning.

The discussion on e-learning and blended learning highlights technology as an online learning enabler, and its potential to enhance educational instruction and thereby impact positively on the learning experience. The following section presents a discussion on the nature of various e-learning technologies and tools with a focus on their potential to improve learner experiences.

2.4.3 Online Learning Technologies and Tools

For the purpose of this study, I define online learning technologies as “Protocol driven infrastructures, which may be exploited by software tools for the purpose of delivering or consuming learning over the Internet”. This definition highlights the primary purpose of online learning technologies which is to facilitate communications such as video conferencing. E-learning tools are specific implementations of online learning technologies such as client/ server software applications, Web services and applications that support one or more of the online teaching/learning functions, for example, a discussion forum used to mediate group projects, or an online quiz to facilitate self-assessment. Because this research was aimed at using online tools and technologies to impact on the experience of learners, the most prominent of these are discussed in the following sections.

2.4.3.1 The Internet and the WWW

The Internet is a global network of inter-connected networks. It can be considered as the online infrastructure and the primary medium of communication for online learning. The evolution of online learning technologies and tools shadows the evolution of the Internet and Internet technologies and tools such as those which constitute the World Wide Web

(WWW). Internet based computer conferencing and bulletin boards were used in education since mid-1980. The Open University (OU), for example, piloted its first conferencing system in 1986 (Kaye & Basich, 1998). However, these tools supported text based instruction and discussion only. The WWW has its roots in a concept called 'hypertext'. The term was coined by Nelson in 1960 (Whitehead, 1996) and refers to 'non-sequential' content as it facilitates traversing through text and other Web media in a non-linear fashion. Tim Berners-Lee, a scientist at the European Organisation for nuclear research (CERN), invented the WWW in 1989 (CERN, 2008). The WWW materialised as we know it today in 1992 when the first Web browser, 'Mosaic', provided a point and click interface to hypertext and thereby general access to Web pages for those connected to the Internet. However, browser functionality was limited and connectivity for the general population was slow. Oliver (2005) suggested that there was very little online learning activity even three years later in 1995, however, as the second half of the 90's progressed, the technology was speeding up, browsers were becoming more powerful and search engines such as Google emerged. In the early years of the new millennium, the WWW grew in accessibility and proficiency at distributing multimedia content.

While the WWW provides access to vast quantities of information, it also spawned what has become the most prominent form of digital communication (Brown, 2010). While email and bulletin boards preceded the Web and facilitated one-to-many communication, when Web based email, such as Yahoo in 1997, became freely available and provided user friendly interfaces, the uptake became phenomenal with hundreds of millions of users availing of speedy transmission of communication and multimedia by way of attachments. Internet communications were further enhanced with the emergence of other communicating technologies such as Internet Relay Chat (IRC) and Voice over Internet Protocol (VOIP). The WWW has also impacted on the versatility of telephone

technologies which can be implemented in an online environment (e.g. Skype and Web texting). Non Web-based communications may be used to augment the communications process in online learning e.g. text messaging could be used as a substitute for email when the message is short and a quicker response is required. In addition, subscribers to mobile services generally have access to Web texts which allow the transmission of texts from a Web browser interface to the mobile phone of the recipient. The impact of such technologies and the improved accessibility and functionality of the WWW meant that, by 2005, the Web was a promising learning platform (Kashihara & Hasegawa, 2005). Currently this 'learning platform' has a variety of software tools which equip it for the task of delivering and consuming learning. For example, Conole & Dyke (2004) argued that the Web with its hypertext functionality supports a social constructivist approach to learning. This results from the non-linear nature in which information is ported to and retrieved from the Web because the learner is faced with decisions on which links to follow and is facilitated in retracing their paths as they build knowledge. However, Web 2.0 emerged with a suite of tools and greater potential to engage learners in a more meaningful way with faculty, peers and learning tasks.

2.4.3.2 Web 2.0

Web 2.0 eludes precise definition and is perhaps best described by its distinguishing features over its predecessor, Web 1.0. These are its facilitation of micro-content and social media such as Twitter and Facebook respectively (Bryan & Levine, 2008). These platforms, according to O'Reilly and Battelle (2009), demonstrate Web 2.0 insight which is about harnessing collective intelligence. From an e-learning perspective this suggests the suitability of the technology for a social constructivist approach to learning. For example Web 2.0 is characterised by dynamic content facilitated by platforms such as Wikipedia where content can be accessed and edited by multiple users. The practical

application of this for e-tutors is that learner centred environments can be designed where learners can, according to Cifuentes et al. (2011), produce, share and edit course content. Wikis, for example, are websites which users can visit and update structure and content as they wish. However, while this approach promotes interaction and the sharing of meaning it must be underpinned by authoritative content and therefore requires substantial moderation by the tutor. Brown (2010) argued that Web 2.0 poses a threat to Virtual Learning Environments (VLEs) such as Moodle. This is because Web 2.0 offers a variety of management content and learning tools and is a new virtual environment where young people live and can learn. The broadest category of tools, either stand alone or providing LMS functionality, is based on their support for synchronous or asynchronous communications. The nature and potential use of such tools in this is discussed in the following section.

2.4.3.4 Synchronous Learning Tools

Synchronous learning tools are those which facilitate interaction, group discussion, communication and discourse across space in real time. Synchronous learning activities pose difficulties across different time zones and therefore involve a timing constraint. However, when time differences are tolerable they offer the advantage that the locations of participants can be diverse. Among the range of synchronous learning tools are video conferencing, audio conferencing, online chat, and voice over Internet protocol (VOIP). Video conferencing tools, for example, are extremely powerful because of their potential in supporting virtual conferencing, virtual classrooms and group discussion in an environment which facilitates both verbal and non-verbal communications. These tools help emulate the functionality of the real classroom. From the learner's perspective, they have the potential to impact substantially on the nature of their learning experience as they facilitate, for example, listening to or seeing course content, questioning tutors and other

learners to negotiate meaning, organizing groups and brainstorming. Several synchronous Web 2.0 tools have emerged in recent years, for example GoogleTalk which facilitates online text based or audio based chat and includes video. However, there are limitations to synchronous learning tools. For example, the requirement of high quality video conferencing for large bandwidths limits the number of locations friendly to video conferencing technologies (Gill, 2005). Audio conferencing and VOIP struggle with narrow bandwidth or modem Internet connections, however, this limitation is rapidly receding as high speed technologies are improving and becoming far less costly. Because this research was conducted in a blended learning environment, module delivery did not have the requirement to conduct virtual classes or engage learners outside of the classroom in synchronous activities.

2.4.3.5 Asynchronous Learning Tools

Asynchronous learning tools, such as e-mail, social networking sites, discussion fora, mobile texting, and blogging, are tools which facilitate interaction, communication and discourse across space without a scheduling requirement. This according to Blum and Sachs (1999) supports the objective of creating a classroom-like environment where participation can occur at individual locations and times. While social networking sites such as Facebook, and micro-blogging sites such as Twitter, have both synchronous and asynchronous features, what is important is that in their use, timing constraints and location constraints are relaxed, while interaction is preserved. Email has been established as the most common means of interpersonal communication and computer mediated communication (Vollmer and Gaßner, 2005). In addition to being beneficial in bridging time delays, e-mails facilitate one to many communications, are easily accessed, stored, and retrieved. Email also allows the speedy distribution of multimedia content by way of attachments, in particular where file size is moderate, otherwise substantial bandwidth is

required (e.g. for video files). Discussion fora have features which are very useful in an e-learning environment. Their asynchronous nature allows participants time to reflect and consider responses. All posts are stored and can be revisited and searched. Mobile texting also offers the potential to communicate asynchronously while at the same time offering greater immediacy should communications be of a more critical or urgent nature.

Asynchronous learning tools have potential in improving learners' experiences, for example, email and texting may be used to communicate critical module elements quickly to learners while discussion fora provide possibilities for peer to peer interaction and collaboration. In the case of this study, access and use of synchronous and asynchronous learning tools, with the exception of mobile texting, were achieved through the Virtual Learning Environment (VLE), Moodle.

2.4.3.6 Virtual Learning Environments

Virtual Learning Environments, also known as learning Management Systems (LMS), are an organised collection of synchronous and asynchronous tools used for delivering learning materials to students via the Web. LMS evolved in parallel with the evolution of communications tools and since the late 1990's have had a growing use in third level colleges (Vovides, 2007). FirstClass, for example, a computer conferencing system, evolved from an internal e-mail system in the mid-1990s, to one which currently facilitates synchronous and asynchronous discussion, group collaboration, submission of journals, the provision of feedback and more recently mobile communications (FirstClass, 2011). Other examples of LMS are Blackboard, Moodle, WebCT and eCollege. Moodle has become the standard in Irish third level colleges. In addition to providing module design and delivery scheduling, it facilitates student collaboration, 24 hour seven day access, student/teacher interaction, online learning, digital authoring tools, discussion boards and assessment tools. Faruque (2012) highlighted the value of Moodle to this study in arguing that a robust LMS

should centralize and automate administration, assemble and deliver learning content rapidly, support portability and standards, personalize content and enable knowledge reuse. Vovides et al. (2007) argued, from a learner's perspective, that LMS should improve and exercise learners' metacognitive skills by, for example, prompting them to plan and attend to relevant course content, in addition to monitoring and evaluating their own learning. This further highlights the usefulness of a VLE such as Moodle in encouraging and supporting learners to engage in learning at a deep and meaningful level

This section has presented the Web as a promising learning platform, in particular Web 2.0, defined by a suite of tools capable of harnessing collective intelligence and promoting deeper engagement with a learning environment. Synchronous learning loses some importance in a blended learning environment, however, because asynchronous tools facilitate interaction, communication and discourse across space without a scheduling requirement, they have the potential to engage learners in an environment which promotes optimal learning, a social learning environment. The Web, for example, may be used to promote social constructivism and texting to increase learner motivation. Moodle, with its collection of asynchronous learning tools can be used to mediate the purposeful interactions of a learning community and provide technology-rich learning environments for learners involved in this study.

2.5 E-Learning Issues

I have witnessed in my own profession, the take-up of technology by educationalists from 'chalk and talk', the slide projector, the overhead projector, and more recently the electronic projector capable of rendering multimedia content. More recently, the Internet, coupled with increasing levels of connectivity, has accelerated the growth and pervasiveness of online learning. However, as Chee (2002, p.1) suggested, the quality of

the learning experience will not necessarily be enhanced by using technology.

Technologies themselves have uses and limitations, suggesting the need for pedagogical influences on the design and implementation of learning technologies. This is important to e-learners who use learning tools to support learning tasks and experience pedagogical quality, rather than merely providing access to information online. Based on substantial experience as an educator and as a life-long learner, e-learning tools must encourage and facilitate learner engagement and deep learning engagement through exploration, discovery and the sharing of learning experiences. Increases in the provision and consumption of e-learning on a quantitative basis are meaningless unless accompanied by improvements on a qualitative basis also.

The increase in e-learning, both in terms of provision and consumption has been dramatic and the resultant reliance on this mechanism of education raises important issues (Quan-Hasse, 2004). As Hentea et al. (2003) highlighted, the potential advantages are substantial, as time and space constraints can be overcome, multimedia delivery can be improved, the curricula can be broadened by access to electronic resources, and learning can be personalised. However, Hentea et al. (2003) also highlighted serious issues such as lack of training, poor course design, software deficiencies, inappropriate use of technologies and poorly designed evaluation, all with the potential to impact on student experiences. In addition, they use the term unsuccessful learning in reference to feedback from learners who criticise assignments and textbooks, feel isolated, and suffer frustration with hardware and software. The literature reflects disquiet among academics and practitioners at the discrepancy between the speed of take up, and the application of established theory to course development, implementation and evaluation (e.g. Stodel et al., 2006; Gill, 2005; Neal & Miller, 2005; Quan-Hasse, 2004; Nichols, 2003; Hentea et al., 2003; Talbott et al., 2002).

2.5.1 Supporting Learning Tasks

Hou Vat (2001, p.329) suggested that online learning tools must enable and support complex learning tasks such as “engaging, reflecting, questioning, answering, pacing, elaborating, discussing, inquiring, problem solving, linking, constructing, analysing, evaluating, and synthesizing”. This list, while not exhaustive suggests online learning tools are learner action oriented and must be useful across a substantial cognitive domain. The list also implicitly suggests that learner to learner and learner to tutor interactions are important components of learning, and must be designed into the system to support such objectives as task completion and relationship building. For example, synchronous communication tools such as chat rooms, support brainstorming, idea generation and consensus reaching, while asynchronous learning tools such as email may be more conducive to information gathering and facilitate deeper reflection.

2.5.2 Supporting Pedagogical Quality

Online learning undoubtedly offers substantial advantages when it comes to providing flexibility in delivery, however, pedagogical quality is not guaranteed. Dalsgaard (2005, p.2) argued that pedagogical quality is normally missing from online learning environments because of a common belief that e-learning technology is pedagogically neutral. Nichols (2003) argued that the primary advances made in e-learning are through pedagogical innovation rather than technical innovation. The assertion is that pedagogy is the determinant and technology the determined. However, this may represent a simplification of the relationship between pedagogy and technology. For example, Neal and Korman (2003) argued that the design, development and implementation of e-learning courses and programmes is complex, and further complicated by the emergence of new technologies both synchronous and asynchronous. Thus, consideration of the potential of

new technologies relative to pedagogical choice is important. Also, Dyke et al. (2006) suggested that experimentation, reflection and abstraction are important to adults for the construction of knowledge. Therefore, as technological innovation (e.g. new models of simulations) impacts to enhance these processes, the possibilities of what can be achieved is expanded and the desired pedagogical approach should be moderated in light of the innovation.

There is a need to refocus learning on pedagogy, on the basis of two key problems (Chee, 2002). Firstly, the approach of porting-the classroom to the Internet is indicative of the instruction paradigm which argues that the mind is a receptacle which can absorb knowledge and concepts as opposed to the participative approach where learners learn through interaction (Fox-Turnbill, 2011). Secondly, Chee (2002) argued that the application of new technology does not necessarily improve learning and that using technology merely to provide access to learning content is misguided and that adopting a pedagogical approach involves using technology to encourage a participative constructivist approach and support learning-by-doing. Nichols, (2003, p.1) argued that the choice of e-learning tools should be pedagogy driven. This is consistent with his postulation that technology is pedagogically neutral i.e. technology is given and should be used to support a chosen pedagogy. Cook et al. (2006, p.4) argued persuasively that hypertext supports a social constructivist view of active learning. They suggest that this is because hypertext facilitates the exploration of various pathways to knowledge. The environment is experimental and hypertext facilitates re-tracking through pathways and learning materials until the required learning outcome is achieved. However, Cook et al. (2006, p.4) concurred with Nichols (2003) as they argued that hypertext supports social constructivism rather than suggesting that a social constructivist approach be taken because hypertext is available. Chizmar and Williams (1998) strongly asserted that the selection of

instructional technology should be pedagogy driven. They argue that when teaching online, the instructor should first decide what pedagogy to use and evaluate the decision in light of the available online toolsets. This was the approach taken in this research and involved considering the behavioural, the cognitive and the constructivist elements of learning.

2.5.3 Supporting a Behavioural Pedagogy

Behaviourism is often mistakenly associated with a teacher centred approach to learning and to a substantial extent not taken seriously as a model for education (Wilson & Myers, 2000; Mayes & Freitas, 2001, p.8). Mayes and Frietas (2001, p.8) argued that behaviourism is concerned with learning by doing, with providing immediate feedback on success, with the analysis of learning outcomes and “above all with the alignment of learning objectives, instructional strategies, and methods used to assess learning outcomes”. They further suggested that constructivism is indebted to behaviourism for many of the methods it uses. The behaviourist theory of learning does have an application to online learning. It may, for example, be appropriate where the recall of factual information is required to facilitate higher order cognitive learning, for self- assessment, or for learning content in discreet chunks such as those that may be appropriate to the building blocks approach to language mastery. Technologies that facilitate this model include online self- assessment tests and objective-based course units (Mishra, 2002). The Advanced Distributed Learning Shareable Content Object Reference Model (SCORM), which involves the development of discrete uncoupled or loosely coupled learning objects, has been criticized for lacking pedagogic neutrality and supporting the content-driven approach (Dyke et al., 2007; Dalsgaard, 2005;). However, it is not essential, and perhaps not desirable, that all online learning tools are pedagogy neutral. What is important is that

tools are available to support the various pedagogical elements of the online learning process.

2.5.4 Supporting a Cognitive Pedagogy

Because the cognitive model of learning assumes that information exists independently of the learner, the application of cognitivism to the pedagogical design of online learning is to the sourcing, retrieval and organisation of information and in supporting the learner in the cognitive processing of information. Because the learner is assumed to be working towards developing expertise, online tools which help the learner conceptualize information in its own independent context are supportive of this model. Among such online tools are search engines, spreadsheets (for sorting and modelling information), and tools to support note taking and building annotations. Conole et al. (2007, p.4) identified four categories of learning objects which offer increasing levels of cognitive support. Firstly, *digital assets*, normally a single file such as a word document or audio clip. Secondly, *information objects* or a structured collection of digital assets designed to present static or non-interactive information. Thirdly, they identified *learning activities* which involve interactions with information to achieve learning objectives and learning outcomes. Fourthly, they identify *learning design* which involves structured sequences of information and activities to promote learning. The first two, *digital assets* and *information object*, have no teaching effect i.e. they represent flat information. The teaching effect is produced when used interactively within learning activities or learning design. *Learning activities* and sequences of learning activities or *learning designs* have a more profound cognitive connection. A specific example of a *learning activity* tool which supports a cognitive based pedagogy is one designed by the Web consortium (W3). This tool allows the learner to edit html script and immediately see the effect of the edit in an output screen (See <http://www.w3schools.com/html/default.asp>). Another specific

learning activity tool is one developed by Matlab (See: <http://www.mathworks.co.uk>) to support learners in their conceptual understanding of wave propagation by displaying a pure sine wave within an interface which allows the learner to adjust the frequency, amplitude and phase while observing the effects of the adjustments on the sine wave.

2.5.5 Supporting a Constructivist Pedagogy

The literature suggests that constructivism is the most effective and preferred approach to e-learning (Ennew et al., 2003; Oliver, 2003, p. 2; Clear et al., 2000). Oliver pointed to problems and inefficiencies with conventional forms of teaching and stated “The theories of learning that hold the greatest sway today are those based on the constructivist approach” (2003, p. 2). Vrasidas (2004) agreed but argued that most online learning attempts to replicate the traditional classroom approach rather than supporting constructivism. Supporting constructivism poses several problems for tutors. The defining features of constructivism (Section 2.3.4) suggest that in order to support the paradigm, the tutor’s role must evolve from disseminator of knowledge to one of learning facilitator by, for example, facilitating learners in testing their current understanding. This is important as constructivism assumes that learning is based on current knowledge. It cannot be assumed that all learners have a similar understanding suggesting they may need diverse learning experiences in order to achieve the desired learning outcomes. Also, in order to apply constructivism the tutor must engage with learners in a way which supports them in bridging their current level of understanding to mechanisms designed to progress it to the desired level of understanding. One such mechanism, for example, may be to encourage and facilitate interaction between learners such that the discourse and reflective thinking makes their level of understanding explicit. Granville and Dison (2005) explicitly emphasised the value of promoting reflection, particularly in relation to situated learning tasks, and advocated this as promoting optimal learning and supporting constructivism. In

addition, Dyke et al. (2007, p.2) referred to reflection, experience and engagement with others as dimensions of the central tenets of learning. They not only advocated the fundamental constructivist paradigm but suggested that e-learning tools should be selected based on how they support such activities.

Several approaches to learning suggest the use of technology to support a constructivist approach. For example, Computer-supported Collaborative Learning (CSCL) is an approach which prescribes the use of online tools to facilitate learning through social interaction. CSCL advocates both collaboration and computer supported cooperative work. Technology is used to support the construction and sharing of knowledge using both synchronous and asynchronous tools but in an interactive way (Stahl et al., 2006). The CSCL approach can be supported by a variety of Web based tools, for example Wikis which facilitate the collaborative construction and presentation of information (Auger et al., 2004).

Filippatou and Kaldi (2010, p.17) highlighted the application of Project Based Learning (PBL) to support a constructivist approach in describing it as involving the undertaking an in-depth study of real world problems "where students' ideas, questions, predictions and interests form the experiences lived and the works/activities undertaken". Filippatou and Kaldi (2010) identified further characteristics of PBL which argue for its support for a constructivist approach. It encourages learners to take control over their own learning as they can choose their own activities. Also, it requires exploration and experimentation while encouraging communication, creativity, and practical thinking in real world situations. Eskrootchi and Oskrochi (2010) agreed in arguing that understanding is enhanced when knowledge is applied in real world contexts where real world problem solving can be exercised. This approach can be supported by simulation tools, for example

IT problems can be explored using 'virtual machines' which are software simulations of real world hardware platforms. Wikis, for example, can be used to develop collaborative content and tools such as Glogster (a visual social network) can be applied to project management while facilitating learners in showcasing and sharing content.

Technologies are pedagogically neutral and technologies should be selected to support the chosen pedagogical approach. Behaviourism may be supported by technologies that for example facilitate self- assessment tests and objective-based course units. The cognitive approach and cognitive processes may be supported by digital assets, for example, and learning activities which involve interactions with information to achieve learning objectives. My preferred approach, social constructivism involves facilitating learning rather than disseminating knowledge. This suggests promoting deep engagement with learning tasks, tutor and peers and encouraging reflective thinking and collaboration. There are a variety of tools supportive of the social constructivist approach, for example, hypertext, discussion fora and Wikis.

2.6 The Contribution of the Literature Review

The literature review has established that optimal learning environments are social environments. This suggests substantial implications for technology mediated teaching and learning. In particular it suggests that implementations should strive to establish a value for the whole person, not just the intellect but the dynamic of the person as a social entity. In the case of the final phase study for example, this suggests there may be value in sending mobile texts to learners informing them of upcoming lecture topics and suggesting an appreciation for their attendance. The discussion on the nature of learning has highlighted the importance of motivating learners towards deep learning. Learners make decisions on how they approach learning based on factors such as the tutor's expectation of them. This

highlights the substantial power that those responsible for module design and delivery have in encouraging meaningful learning. The implementations were an exercise of this power aimed at promoting deep learning. The most prominent learning theories have been reviewed and contributed to the study by establishing social constructivism as my choice of approaches to facilitating meaningful learning, particularly when the required outcome is deep learning. A discussion on e-learning and blended learning has framed the environment for the final study phase as one suitable to supporting learners in engaging with module content and learning tasks in a flexible way and developing a strong sense of community. Finally, an understanding of how various e-learning tools can support pedagogical approaches, coupled with the established precedence of pedagogy over technology supported me in achieving an informed selection of e-learning tools to use as implementation mechanisms in addressing the research question

2.7 The Research Question

The primary objective of this research was to improve the experience of e-learners. The research question factored from this objective was:

- Can a set of empirically designed implementations, in a blended learning environment, improve the experiences of learners?

In the case of this research question, empirically designed recommendations were a set of recommendations abstracted from themes which emerged from the first phase study, and which were consolidated in the second phase study and a review of the literature. These recommendations were:

1. To provide active leadership
2. To develop an active learning community
3. To provide clear communications on module elements.

The concept of improving the experience of learners was based on the perception of learners i.e. did learners perceive that the implementations improved their learning experience based on their judgement on the impact of the implementations and their previous learning experience. The research methodology (presented in chapter 4) aimed at addressing this question assumes that learners are experts at understanding and articulating their lived experiences.

Chapter four presents the plan for addressing the research question and determining if the implementations were successful i.e. did they improve the experience of learners. The next chapter outlines the development of the set of implementations aimed at achieving thisThe Study Phases and the Implementations

3.1 Introduction

The objectives of this chapter are to present an overview of the three phases of the study, to describe the consolidation of the findings from the first two phases and to describe how the actions for implementation in the final study module were factored out. It also presents a description of the final study module, its components and participants, important because this sets out the context within which the actions were implemented. Table 2.1 below sets out the sequence of the research processes

Table 2.1: The Research Process Timelines

Dates		Research Phase	Process
From	To		
8/09/2008	5/12/2008	1	Learners undertake EVENE Modules
8/12/2008	10/12/2008	1	Learners complete report on learning experiences
12/12/2008	15/12/2008	1	Learners undertake IPA type interview
01/01/2009	31/04/2009	1	Recommendations for improving experiences developed
05/05/2009	09/05/2009	2	Eight phase two study interviews conducted
09/05/2009	30/05/2009	2	Phase one study and two study findings consolidated
10/06/2009	31/08/2010	2	Set of Implementations were developed
15/09/2010	10/12/2010	3	Learners undertake final study module

05/01/2011	07/01/2011	3	Questionnaires administered and data collected
10/01/2011	15/01/2011	3	11 Semi-structured interviews conducted
01/02/2011	31/05/2011	3	Analysis of questionnaires and interviews conducted
01/06/2011	31/06/2013	3	Writing up

As this study was based on action research, the outputs from the first two phases of the study, consolidated with the literature were a set of definable actions, aimed at improving learners' experiences. These actions were implemented in a blended learning environment. It must be noted however that the output from the first phase study was a set of consolidated themes which informed substantially the design of the second phase study. The second phase study was not an independent study but elicited opinions from e-learners and e-tutors on the recommendations ensuing from the first phase study. The first phase study was an exploration of learner experiences. The results of this study provided substantial evidence that the learnings experiences of first phase study participants were primarily negative.

3.2 The First Phase Study - An Overview

The first phase study (submitted as the EdD Pilot Study) , conducted in September 2008, involved exploring the experiences of e-learners, all between the ages of 20 years and 23 years, and all in the final year of a Bachelor's degree in Information Systems Management (ISM) at the GMIT. Each learner had an option to undertake one or two five ECTS credit modules from partner EVENE institutions in place of elective modules provided at the GMIT. These modules were delivered in Moodle. All assessment was project based and on a continual assessment basis. As Table 2.2 below depicts, two learners undertook two modules each and three learners undertook one module each.

Table 2.2: Modules undertaken by EVENE Learners

Learner	Gender	Module/s	Nationality of Providing Institute
1	Female	Computerised Data Processing	Czech Republic

		Intercultural Competence	Italy
2	Male	Programming Techniques	Czech Republic
3	Female	DTP and Electronic processing	Czech Republic
4	Male	Marketing Research using SPSS	Latvia
		Programming Techniques	Czech Republic
5	Male	Financial Services	United Kingdom

As the purpose of the EVENE project was to provide virtual mobility to learners and evaluate its effectiveness, each learner was required to participate in that evaluation. As programme tutor, I had a responsibility to monitor the experience of GMIT learners undertaking various EVENE modules. As part of the evaluation, each learner was required to submit a short report on completion of the module or modules they undertook (See Appendix B for report submitted by student four). The primary purpose was to provide an initial focus and identify themes for further exploration by semi-structured interview. The report was requested under the following headings:

- 1) The learner's overall perception of e-learning as impacted on by undertaking the module.
- 2) Positive experiences encountered by the student while undertaking the module (e.g. sense of achievement, senses of affiliation with other students, in control of own learning)
- 3) Negative experiences encountered by the student undertaking the module (e.g. frustration, disappointment etc.)
- 4) The students opinion on what steps could be taken to improve their experiences while engaging in e-learning.
- 5) Any major issues that arose for the learner while undertaking the module.

A number of themes were identified in the reports. These were used to develop a semi-structured interview for each learner. The interview guide for learner four is presented in Appendix C. Learners were encouraged to explore and articulate their experiences as relating to such themes. Each interview was scheduled to last 30 minutes. Data analysis involved an iterative review of interview recordings for the emergence of themes. The

analysis revealed that EVENE learners had very negative learning experiences, primarily because they perceived a lack of leadership and guidance. They also felt that communication between tutor and learner was poor and subsequently levels of motivation diminished. The recommendations ensuing from this study, aimed at improving the experience of e-learners, were to provide leadership and guidance, to provide good communications and to improve learner motivation. These findings are further discussed in section 3.4 where their consolidation with the second phase study is described.

3.3 The Second Phase Study- An Overview

A full report on the second phase study was submitted to the Open University in fulfilment of progression report nine (PR09) of the EdD. This study, conducted in May 2009, involved eliciting the opinions of four learners, with previous e-learning experience, and four tutors, with previous e-tutoring experience, on the recommendations ensuing from the first phase study and any other issues they deemed important in improving the experiences of e-learners. An e-mail was sent to all lecturers at the GMIT, inquiring if they had previous e-tutoring experience. Lecturers who responded positively were requested to participate in an interview aimed at eliciting their opinions on improving the experience of e-learners. An email was also sent to the body of students at the GMIT inquiring if they had previously undertaken one or more e-learning courses. Students who responded positively were requested to participate in an interview aimed at eliciting their opinion on how their learning experience may have been improved. The first four respondents from e-tutors and e-learners were selected to participate in the study. A brief introduction to each e-tutor is presented in Table 2.3 below:

Table 2.3: e-Tutors participating in phase two study

Name	Discipline	Years of Lecturing experience	e-Tutoring Experience
Agnes	IT	12	Agnes used Moodle to deliver IT modules in e-learning and blended learning mode
Carl	Civil Engineering	2	Carl used Moodle to deliver Civil Engineering modules in e-learning and blended learning mode
Eddie	IT	7	Eddie has experience of module delivery in fully online and blended mode
Debra	Business	35	Debra delivered a language module fully online, and currently uses Moodle to deliver content and control its release to learners

Table 2.4 presents a brief introduction to the four e-learners

Table 2.4: e-Learners participating in phase two study

Name	Discipline	Experience
Fay	e-Learning	Fay has e-learning experiences as a mature student, primarily based around a Master's Degree she recently undertook in e-learning at the Open University. As an e-learning professional, Fay has gleaned substantial experience from undertaking e-learning modules.
Marion	Business	Marion, a mature 4 th year business studies student had recently undertaken e-learning as a mature student with the University of Belfast. The primary modules she undertook were in Human Resource Management and Project Management.
Eddie	IT	Eddie had recently undertaken a Masters in Adult Learning and Education at the national University of Ireland. He choose e-learning as his dissertation topic for his Master's degree
Bill	Civil Engineering	Bill was currently undertaking a Masters in Civil Engineering in a purely online mode.

The eight participants undertook a semi-structured interview in which they were asked to comment on recommendations drawn from the first phase study, for example, on the importance of 'leadership' in an e-learning environment. E-learners and e-tutors were also asked to comment on any issues they felt were important to the success of e-learning. The interviews with e-tutors and e-learners resulted in 260 minutes of interview data. Analysis proceeded in a phased approach as follows:

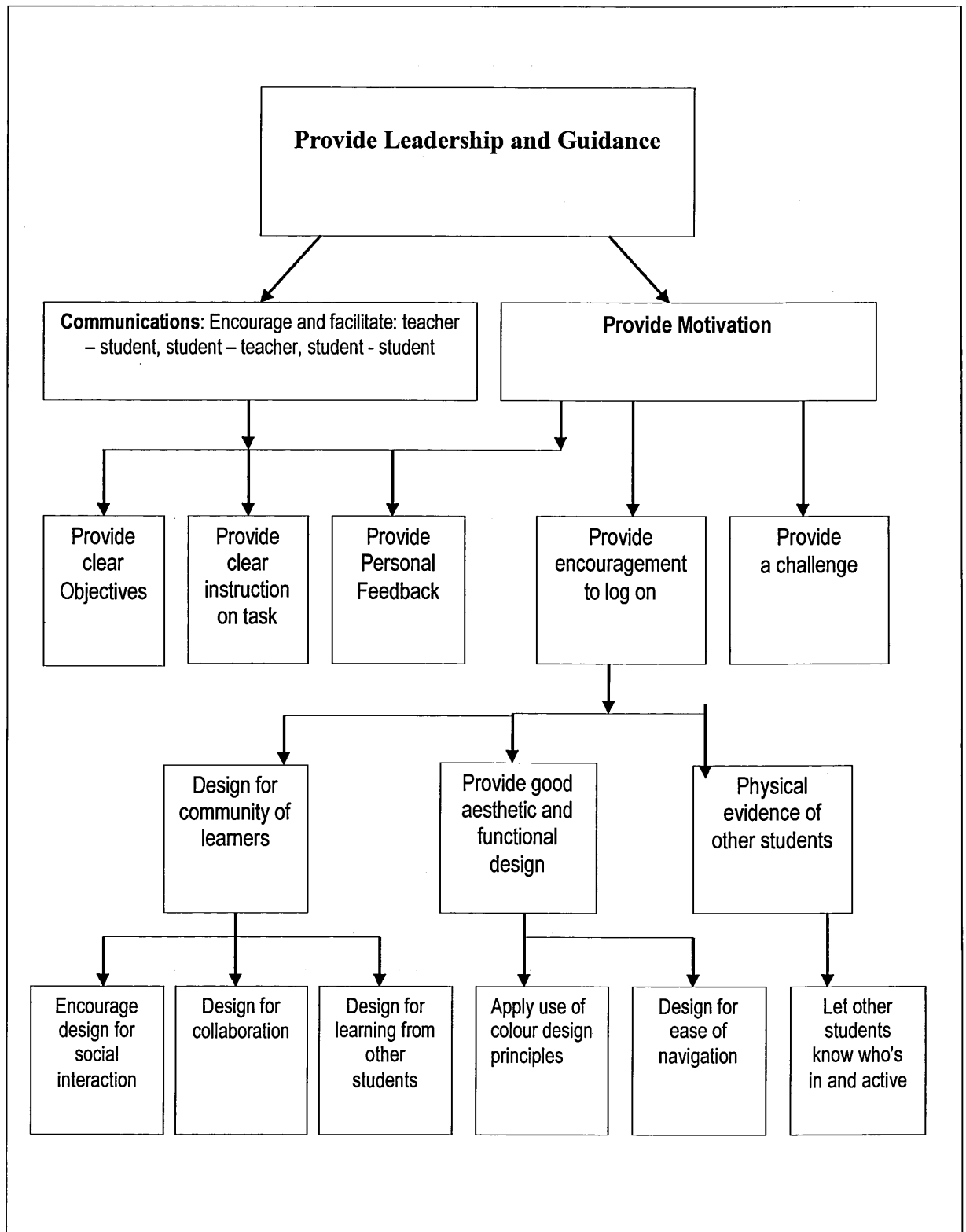
- The '*post interview impressions phase*,' which captured the immediate impressions left after each interview.
- The '*interview transcription phase*,' which capturing a high fidelity transcription of each discourse.
- The '*capturing the interviewee voice phase*,' this involved filtering out key comments from transcriptions.
- The '*preliminary theme extraction phase*,' this phase involved drawing themes from key comments and the surrounding discourse.
- The '*theme organisation phase*,' this involved organising the emerging themes into a hierarchy.
- The '*theme consolidation phase*,' this involved distilling the themes from all the interviews into one hierarchical table.
- The '*action phase*' which involved drawing a number of recommendation from the themes which could be implemented in module design and delivery for the final phase study.

The theme consolidation phase and the action phase are further discussed in the following section.

3.4 Consolidation of First and Second Phase Study Findings

Themes, emerging from the first study interview data were organised into a hierarchy (Figure 2.1 below), however, as argued below, when the emerging findings were considered in light of the literature it became obvious that the hierarchy was arbitrary (Heffernan, 2008).

Figure 2.1: The First phase study - consolidated themes



As Figure 2.1 above depicts, these themes were presented as recommendations for improving learner experiences, for example, to 'design for social interaction'. The second phase study elicited the opinions of e-learners and e-tutors on such recommendations and thus the second phase study themes were primarily given. All recommendations from the first phase study were reinforced by the findings of the second phase study.

While the first phase study gave evidence of the potential of e-learning environments to host rich student learning experiences, the high level themes emerging identified the need for active and responsive leadership, guidance, good communications, and high levels of motivation in order to harvest the benefits of IT mediated learning. These recommendations were reinforced in the second phase study where the voices of respondents argued for the importance of providing active and responsive leadership, developing an active learning community and providing clear communications of module elements such as a module overview and learning objectives. These were consolidated as major themes for action (Table 2.5 below). The theme 'motivation' emerged explicitly from the first phase study and implicitly in the second phase study. I would argue, however, that the themes 'active leadership', 'active learning community' and 'motivation' are substantially enveloped within the theme 'communications'.

Communication is the primary tool of active leaders because it enables and gives evidence of active and responsive leadership which in turn impacts on learner motivation.

Communications facilitate the development of an active learning community which also impacts on learner motivation.

Table 2.5: The consolidated second phase study themes

Module Design Level Themes	Module Delivery Level Themes
1. Communication of clear and precise learning objectives	1. The provision of feedback
2. Communications of instructions on achieving learning tasks	2. Active Leadership (provision of)
3. Communication of module overview	3. An Active Learning Community (development of)
4. Communication of fair assessment	
5. Design of the online environment	
6. Design for small tutor groups	

Therefore while the theme motivation was not explicitly factored as an output action, levels of motivation are impacted on by communications designed to give evidence of active and responsive leadership and evidence of an active learning community. As this section is concerned with rationalising actions, the following sub-sections will respectively focus on active leadership, an active learning community and motivation and argue that activating communication is the appropriate mechanism for factoring them into the final phase study.

3.4.1 Active Leadership

This section argues that providing active and evident leadership is primarily a communications issue. The major theme surfacing from the first phase study was communication in terms of its scarcity. In addition, the second phase study highlighted its

importance. When asked about active leadership for example, Eoin, when interviewed in the second phase study, steered the conversation towards communication and reflected on the importance of teacher presence in the forums and the with reference to providing speedy feedback to learners stated that “it (feedback) is an important element of active leadership”. Agnes in the second phase study, reinforces the concept; “you always have to be behind the machine...I think that communication is key and communication is human, so therefore to see it as a conduit”. Cheol (2003) agreed in arguing that poor communication strongly indicates a deficit in leadership and guidance.

While the first phase study reported that learning experiences had been impacted upon very negatively by the total absence of active leadership, the literature would suggest that always being there behind the machine is not sufficient. For example, a study, conducted by Stodel et al. (2006, p.9), which looked at learners’ perspectives on ‘what is missing from online learning’ reported that while two professors provided robust intellectual and scholarly leadership, which was acknowledged by students, students still felt that they did not have adequate access to the professor’s expertise. This was surprising as Stodel et al. (2006) gave evidence that the courses were designed to a very high standard and aimed at providing a social infrastructure to foster the development of a community of critical inquiry. The modules had some face to face contact, used email, discussion forums and chat rooms, suggesting a highly discursive model. This raises the question, what is required in an e-learning environment to assure that learners feel they have sufficient access to the tutor’s expertise? The first phase study highlighted the negative impact of low tutor accessibility and provided strong empirical evidence that successful e-learning delivery requires active and robust leadership which encourages and fosters interpersonal relationships. Evidence of active leadership can, for example, be improved by the use of rich communication mediums such as video conferencing and asynchronous tools such as

discussion forums. Anderson (2003) in referring to the notion of leadership argued that the teacher should not only provide academic content but model academic standards. This would, to some degree at least, appease the appetite of learners for a sense of participation in 'a broader academic community' where learners interact with one another and the 'leading' tutor. This requirement, along with the requirement to share subject matter, communicate the intellectual climate of the module, to model the qualities of a scholar and to prompt learners into meaningful learning activities suggests the key role of communications and communication technologies.

3.4.2 Active Learning Community

Swan and Shea (2005) argued the social constructivist view that learning is fundamentally a social activity and that the development and fostering of an active learning community is essential to successful e-learning. The first phase study supported this contention and the second phase study concurred. Fay for example, an e-learner interviewed in the second phase study, highlighted the importance both of developing an active learning community and communications when she argued that

“...a one to one relationship, learner to facilitator is too lonely. No matter how nice the facilitator is it's too lonely.”

She believed that group interaction was “crucial” in an online environment. With reference to her own experience she related that:

“...survival in the module depended on the social element – networking and sharing”

Fay also highlighted some of the benefits of collaboration:

“You know, when you found a good resource you passed it on, there was a real sense of altruism, which was fantastic... there was very much a sense of everyone buoying each another up...”

She continued to argue for the importance of lots of group activities and the importance of finding ways of getting learners to work together, again highlighting the importance of using the available communication tools. Marion, a second phase study participant, highlighted the social constructivist element of active learning communities by arguing that:

“...you learn from different point of views.”

She also highlighted the importance of face to face meetings as she argued that:

“...when you don't see people in there... you're very cautious or...cagey.”

Indeed she highlighted the importance of putting faces to names by saying that:

“I enjoyed that better...and from a motivational point of view we participated better...and...supported each other.”

Eoin, a second phase study participant, felt that peer to peer activities such as forums were vital to keep learners engaged and motivated and a good place for tutors to display active leadership. He advocates their suitability for fostering social constructivism in suggesting that:

“...when active leadership is not forthcoming that peer interaction can help bridge the gap.”

Bill, a second phase study participant felt that forums needed to provide more than the bare bones as learners will not engage if they do not see an advantage in it. As he said:

“...it was very much just bare bones, matter of fact kind of stuff, now...
now I am not doing a Masters to make friends out of it you know like...
it was a little bit kind of stoic or something for me...it lost the sheen.”

Collaborative learning environments however can offer an advantage, as Ciocco et al. (2005) argued that collaborative networks are useful for developing learning communities where they claim cooperative teams achieve deeper and more robust learning than students working alone do.

3.4.3 Motivation

Motivation is a complex concept. Indeed Jones and Issroff (2006) argued that motivation, in the context of e-learning, can no longer be viewed simply as factors which promote a person's willingness to work. This section recognises that motivation is a complex issue but argues that it can be profoundly impacted on, positively or negatively, by the quality of active leadership and communication and therefore has an implicit presence in these themes. McCombs and Vakali (2005) argued that any ignoring of motivational issues severely limits any learning environment. This section argues that while motivation is not carried forward as a primary theme with prescribed actions, virtually all actions aimed at improving active leadership or active learning community or the communication of module elements improve motivation. The following examples from the second phase study support this argument:

- Bill felt that having a more active teacher presence would have kept him *‘a bit more on the ball’*
- Eoin felt that feedback is important to facilitate self-assessment and with reference to not being able to judge your own standard states *‘...that just drains your motivation’*

- Debra felt that providing clear learning objectives gives the student a sense of purpose i.e. to know ‘...*what’s the whole purpose of this?*’
- Eddie felt that positive feedback is important because ‘...*that encourages people*’ and with reference to negative feedback he would rather call it trying to give them ‘*the wisdom of your knowledge*’
- Fay felt that because so many online activities involved peer to peer collaboration that ‘*you couldn’t let the side down*’ and recalled the ‘*sense of altruism*’ invoked when peer to peer communications were improved.

JISC (2004) suggested that learning may be self-motivated to varying degrees. This is consistent with motivational theory which suggests, for example, that individuals are motivated by the intensity of their own personal need for achievement or their need for affiliation (Schermerhorn, 2005; Huitt, 2004). Thus, individuals have intrinsic levels of motivation. The final phase study is more concerned with the impact of achieving active and responsive leadership, an active community, and good communications of module elements on extrinsic motivation – motivating factors emerging in the learning environment.

Schermerhorn, (2005, p.323) defined leadership as the “process of inspiring others to work hard to accomplish important tasks”. He thus highlighted the motivational role of leaders and established the link between active leadership and extrinsic motivation. Mazoue (1999) in highlighting the importance of achieving student commitment, by offering opportunities to discuss course material, in addition to providing on-going guidance and feedback, reinforced this link. This type of motivational support, he argued, will help students evaluate their progress (an issue which arose in the second phase study) and develop a commitment to achieving the learning outcomes. He also highlighted the importance of developing an active learning community by mentoring peer-to-peer interaction, by video

conferencing for example. This he argued will reinforce knowledge acquisition and strengthen a commitment to shared instructional objectives. This is essential to any social constructivist approach to module design.

It was clear from the first phase study that intrinsic levels of motivation were not adequately supported by module design. Indeed, in three cases, encountered in this study, the opposite was true and motivational levels were diminished by shortcomings in module design or delivery. In these cases, Mazoue's recommendations were conspicuous by their absence. For example, feedback was not forthcoming even on negative outcomes. In the second phase study, Fay, who felt "punched in the gut" by negative feedback soon realised that it was "enabling feedback" and provided the necessary impetus or motivation for her to achieve the learning outcomes. This is another empirical link between communications and feedback. In addition to reflecting the intrinsic needs of the individual learner, such as Fay's need to "picture the year ahead" and "tick things off", motivation reflects several elements of the learning environment including leadership, communications, interaction/collaboration, the nature and quality of leadership in the learning environment, and the applied pedagogical elements.

3.4.5 Communications is key

A review of the consolidated themes both at module design level and module delivery level of the second phase study gives evidence to Agnes's statement that communications is key. At module design level, themes one to four explicitly call for the clear communication of module elements. Theme five, 'design of the online environment', relates to the quality of the online environment in communicating learning materials and learning tasks to the learner (e.g. ease of access, ease of navigation, avoidance of clutter, clarity and simplicity). Theme six 'design for small tutor groups' has at least a pseudo communications element to

it as it relates to communicating the concept of tutor presence and fostering collaboration and social learning through forums etc. At module delivery level theme one relates to the communication of feedback both positive and negative, and speedy if not instant. Theme two, 'active leadership', relates primarily to communication. Some examples, drawn from the second phase study data analysis are as follows:

- Learner has a sense of comfort and security in being able to contact tutor.
- A readily available tutor will reduce feelings of isolation among learners.
- Letting student know in advance (if tutor is unavailable for a time) increases the perception of tutor presence.

The suggestion is that Agnes is correct in stating that communication is key. This may explain the negative experience of learners participating in the first phase study and suggests that good communication unlocks the potential e-learning environments. Based on research and professional experience, Peslak (2003, p.9) stated that the most important concept he found is communications and highlighted the importance of asynchronous communication tools as follows:

"I emphasize communication upfront through clear written documents such as the course syllabus; through active asynchronous interchange in forums and e-mail; through direct contact between instructor and student via e-mail, forums, office phone, cell phone and now instant messaging."

The following section presents the strategy for providing and making active leadership visible, developing a learning community and communicating critical module elements to learners.

3.5 The Implementations and the Literature

The consolidated findings of the First phase study suggested that a social constructivist approach to module design and delivery may be appropriate. The implication of adopting a constructivist approach to pedagogic design for online learning involves customization of curricula and teaching strategies in cognizance of the learner's prior knowledge and background (Saade et al., 2005). The consolidated findings suggested that strategies should include the posing of open-ended questions that promote discourse, diversity of opinion, and dialogue among learners, provoking an air of uncertainty and a quest for the resolution of meanings in the mind space of the learner. However, placing responsibility on learners for the construction of knowledge also necessitates that their cognitive ability be not be taxed beyond reasonable capabilities. Also, learners should be grouped with others who are unable or unwilling to make a reasonable contribution in collaborative efforts. In addition, learning abilities and cognitive capacity must match the learning objectives of the stated curriculum so as not to under challenge or over challenge the learner.

According to Lynn, Thompson and McDonald (2005), while there are variations of viewpoints among constructivists, they all agree that learning is active, situated, and social. Chizmar and Williams (1998) presented seven principles for good teaching practice in the choice of pedagogy:

- 1) Encourage contacts between students and faculty.
- 2) Develop reciprocity and cooperation among students.
- 3) Use active learning techniques.
- 4) Give prompt feedback.
- 5) Emphasise time on task.
- 6) Communicate high expectations.

7) Respect diverse talents and ways of learning.

(Quoted directly from Chizmar and Williams (1998, P. 165)

What is noteworthy of these seven principles is that they are learner centric. Each one has the potential to enhance learner experience. In addition they implicitly espouse the constructivist approach to e-learning and suggest the use of specific tools (e.g. discussion forum to facilitate communications between students and faculty and calendar to emphasise time on task). Nichols (2003), in recommending that tools be made available to facilitate meaningful learning, referred to an active learning process, diverse expressions of knowledge, collaborative problem solving, and real world activities. A toolset based on a constructivist pedagogical design, may include emails and discussion groups to facilitate the establishment of group objectives, Web pages and search engines to facilitate the collection of information, data analysis software to organize and add meaning to information, and simulation and animation tools to promote understanding of real world concepts (Mishra, 2002). All this, in theory at least, points to a potentially rich, multi-tool, mediated learning experience for students. The overall e-learning experience is gained as learners use technology to undertake learning tasks. It is not surprising then that the literature provides substantial discussion on technology and pedagogy (Section 2.6). In an IT mediated learning environment online learning tools are used to enable and support learners as they undertake learning tasks such as engaging, reflecting, questioning, answering, pacing, elaborating, discussing, inquiring, problem solving, linking, constructing, analysing, evaluating and synthesising (Hou Vat, 2001). This raises two questions central to the quality of students' experience. Firstly, the suitability of individual tools for supporting learning tasks and secondly the pedagogical quality of learning design. The theme 'support learning tasks and allow learners to experience pedagogical quality' is well supported in the literature. For example, Gilbert et al. (2007) suggested several

theoretical frameworks and empirical studies which identify technology and pedagogy as key determinants of quality e-learning experiences. They highlighted the importance of technology, pedagogy and organisational context, and advocate attention to pedagogy, technology and creativity. Adams (2004) argued that pedagogy is of primary importance as it determines the way students engage with learning matter. Thus pedagogy can be seen as having a major influence on the quality of the students' experiences. Nichols (2003) also elevated pedagogy in suggesting that it should inform tool selection. Indeed, the case for pedagogy driven design is supported by a broad range of the literature e.g. (Dalsgaard, 2005; Neal et al., 2003; Chee, 2002; Chizmar and Williams, 1998). Conole et al. (2004) made explicit the importance of technology and pedagogy, and gave precedence to pedagogy by developing a tool which helps to map pedagogic design to tool. The first phase study produced scant evidence that any student had strong explicit feelings or views with regard to technology or pedagogy. I did however conclude from the first phase study and second phase study that active leadership, while being evident and responsive, should be so regardless of the adopted pedagogy. Both the first phase study and second phase study results suggested this is an overriding principle in any e-learning environment. For example it was an issue for Fay who highlighted the importance of the visibility of "the man behind the machine" in reflecting on her e-learning experience across diverse pedagogies. The second phase study, both from a learners' and tutors' perspective highlighted the importance of social constructivism as a theory to guide pedagogic design. This is consistent with my preferred pedagogic approach, which I believe is most appropriate to Masters' students studying research methodology and statistics. The first, high level recommendations, aimed at improving learners e-learning experiences emerge as follows:

- 1) Apply a social constructivist approach
- 2) Specify the task to promote social constructivist learning

- 3) Specify the task to promote use of e-learning tools which best support constructivist learning
- 4) Use evaluation techniques which are consistent with constructivist philosophy

These recommendations recognise that the pedagogy underlying module design, including learning task design, instructions on achieving learning outcomes, and assessment, will impact on the experience of learners. For example, a task which promotes social constructivism may be group based and specified to require information gathering on diverse views, ideas and theories, in addition to concept linking and the integration of knowledge. The Web, because it facilitates parallel streams of nonlinear inquiry through the use of hyperlinks, may be an appropriate tool. Microsoft word, suited to recording, organising, depicting, reflecting on and questioning gathered information, may be used to develop a report for assessment. However, because this tool supports the copy and paste function, Morgan et al. (2006) argued that it may “subvert the constructivist philosophy”. This suggests applying one of two strategies. Firstly, the report specification could require varied representations of concepts by the use of graphics. Such concept mapping or concept comparison mapping graphics encourage knowledge integration. Secondly it may be more appropriate to replace or augment the report with a group presentation open to questions afterwards, thereby encouraging the group to broaden, share and negotiate a common understanding of information and concepts. This will also encourage interactivity which Thorpe and Goodwin (2006) argued plays a very important role in e-learning.

This section has traced the development of the set of action which were implemented in a blended learning environment. The plan for implementing the actions is presented in the next section.

3.6 Implementing the Actions

Table 2.5 presents a list of themes or recommendations for improving learner experiences. For practical purposes these are presented as two distinct groups, module design level themes and module delivery level themes. The size of tutor groups (module level delivery theme six) was not relevant as module design was based on one single tutor group. Therefore tutor group size was not considered further. In addition, the design of the online environment (module level delivery theme five) was substantially given, however I endeavoured to provide easy access to information and clear links etc. The discussion of the findings has argued that the remaining themes are all encompassed within the concepts of *'active leadership'* *'active learning community'* and *'communications of module elements'* suggesting a three pronged approach to improving learner experiences i.e. implementing actions to achieve *a high salience of leadership, an active learning community* and *good communications of module element* which are learning objectives, instructions on achieving learning tasks and the assessment scheme.

3.6.1 Implementing Active Leadership

Active leadership in the context of this study refers to the pervasive, approachable presence of the tutor in fostering confidence and motivation in learners. More specifically it refers to a presence which was conspicuously absent from the modules undertaken by learners who participated in the first phase study. Active leadership suggests a presence which should be aware of learner needs, easily contactable, approachable, supportive, and responsive, and one which communicates enthusiasm and high expectations to learners. The provision of active leadership also needs to be underpinned by an approachable tutor mind set in order to be sincere and be perceived by learners as genuine. My general disposition towards learners reflects this mind set. Active and salient leadership was enforced through the following actions:

- 1) Ensuring learners had contact details of tutor.
- 2) Getting mobile phone numbers of learners to facilitate sending group texts.
- 3) Becoming familiar with the name of each learner to improve one to one communication. This was assisted by scheduling a short meeting with each learner early in the module for a general discussion. Learners were asked, for example, why they were undertaking that particular Master's degree.
- 4) Setting one hour aside each week for individual learner consultations.
- 5) Observing individual attendance at face to face sessions and forums in order to detect learner drift. When detected or suspected early intervention occurred.
- 6) Communicating enthusiasm to learners, learners could not be expected to remain enthusiastic if the tutor was not.
- 7) Using communication technology to provide continual general feedback to the class.
- 8) Providing speedy and potentially useful individual feedback to learners, for example, speedy feedback was provided using mobile texting and potentially useful feedback using the comment tool in Microsoft word in conjunction with embedded audio feedback.
- 9) Continually communicating expectations to learners. This was done at the commencement of each topic on Moodle and reinforced at each face to face session.
- 10) Ensuring learners felt welcome and confident in approaching me. Learners were explicitly welcomed by adapting a friendly and supportive tone and efforts were made to approach any difficulties in an objective and non-judgemental manner.
- 11) Responding quickly to questions. A time was set aside each working day to respond to questions posted on the forums.

- 12) Scheduling a daily forum visit and determining if some action was required, for example, mobile texting was used to nudge several learners to participate.
- 13) Directing learners towards new emerging learning material.
- 14) If I was unavailable for a period, it was decided to inform learners and provide them with learning tasks which would progress them towards the learning outcomes.

3.6.2 Implementing an Active Learning Community

It was attempted to foster an active learning community from the outset to module completion. The objective was to enhance the experiences of learners by promoting an active and productive interaction with peers. I endeavoured to convince learners of the value of peer learning activities. The following actions were taken:

- 1) Learners were issued with name badges to promote a level of intimacy and enhance communication.
- 2) Each learner was asked to introduce themselves, provide a little background and say a little on what they hoped to gain from the programme and the module.
- 3) Learners were advised on the value of participating in an active learning community e.g. contributing to forums etc. Direct quotes for the second phase study were useful for this e.g. *'Survival in e-learning module may depend on the social element; networking and sharing'*
- 4) Expectations regarding contribution to forums were related to learners.
- 5) I monitored forum discussions and encouraged non-contributors to engage.
- 6) Each peer to peer activity was monitored in the forums and learners were asked to report on their progress at face to face meeting.

- 7) Learners were encouraged to get involved in study groups for revision. Each group was supplied with a problem set and advised that each learner should present the solution to one problem each week to his or her study group.

The final set of interventions involved the communication of module elements such as the module overview, clear and precise learning objectives, and instructions on achieving learning tasks.

3.6.3 Communications of Module Elements

Communications of module elements, module overview, clear and precise learning objectives, and clear instructions on tasks when appropriate, involved presenting them on Moodle and orally from the outset of the module. In addition actions were taken to ensure the learners understood the assessment mechanism and were facilitated in reviewing their own grades in light of marking schemes. Actions taken are specified below:

A module overview with sufficient detail to facilitate the learner in monitoring their progress through the module was presented. Topic one, on the virtual learning environment (VLE) Moodle, presented an introduction to the module and provided a link to a Microsoft word document outlining weekly topics, learning objectives in general terms, learner deliverables (such as the research proposal) and the assessment method. The module overview topic was discussed at the induction session (15th September, 2010) where learners could ask questions. This topic included learning objectives to encourage the learner to engage and develop a good understanding of what the module was designed to achieve and how module delivery was to proceed. Topic one was supported with a discussion forum.

Clear and precise learning objectives were presented textually in Moodle with the introduction to each topic. When appropriate each learning objective was accompanied by

a statement on what the learner should be able to achieve. For example, the learning objective ‘to develop an understanding of the usefulness of the box and whisker plot’ involved informing learners that they should be able to explain why one interquartile range might be larger than the other.

Communication of instructions for achieving learning tasks were provided with a comprehensive guide for developing a research proposal. In addition, clear and precise instructions were provided for technical tasks such as running statistical analysis tests. When appropriate such instructions were provided by way of links to Web resources such as podcasts and online tutorials.

Communication of a fair assessment scheme: The assessment scheme comprised of 50% for a research proposal and 50% for an end of module exam in statistics. The research proposal was evaluated on a number of weighted criteria. The evaluation criteria was communicated to students in a document entitled ‘Guidelines for developing a research proposal’. The end of module exam was graded according to a grading scheme which was posted on Moodle subsequent to the learners sitting the exam.

This section has traced the development of actions which were implemented in the module Research Methodology and Statistics. The next section provides an overview of this module.

3.7 The Implementation Module and Participants

The actions were implemented in a module called ‘Research Methodology and Statistics’. This module was designed by course board prior to development of the implementations and therefore was not influenced by the phase one study or the phase two study. It was a mandatory module which learners undertaking a Master’s Degree in Business Innovation

undertook. The module was weighted at five ECTS credits with research methodology comprising 50% and statistics 50%. Appendix A presents the module descriptor, intended learning outcomes, module content, and the reading materials. The intended learning outcomes for the research methodology element of the module was assessed by evaluation of a research proposal which each learner was required to develop. The statistics element of the module was evaluated by an end of module exam. The module was designed to be delivered in blended learning mode with approximately 50% of the intended learning to be addressed in the classroom with 26 hours of face to face activities. These activities included approximately 13 hours of lectures and 13 hours of Socratic sessions where for example learners could have issues relating to their research proposal discussed in the classroom. Moodle was used to deliver the online element of the module. This learning platform was used to make learning materials such as class notes, PowerPoint presentations, and research papers available. Other features of Moodle such as discussion fora and it's facility to host podcasts were also used. The module was undertaken by 20 learners. These are further described in Section 4.11 which describes the target population/

Twenty learners undertook the module Research Methodology and Statistics, 14 Irish GMIT post-graduate student and six foreign students. The 14 Irish post-graduate students had four mature students among them, two male and two female. All of the mature students had worked at management level in the hospitality industry. The foreign students included three Chinese students, two Saudi Arabian students and one Brazilian student. This module commenced in September 2010 and was delivered over the course of 13 weeks.

3.8 Conclusions

This chapter has contextualised the research in terms of the first and second phase studies. It has traced the derivation of the actions for implementation as they emerged from these studies and argued their consistency with the literature. It has also described the list of practical actions aimed at providing active leadership, developing an active learning community and providing clear communications on module elements. It has described the context within which the actions were implemented, that is in the module Research Methodology and Statistics which was delivered to 20 learners undertaking a Master's in Business Innovation. This chapter has established the framework for the final phase study which is the focus of the remainder of the thesis. Chapter four presents the research plan, aimed at addressing the research question, that is, can a set of empirically designed implementations, in a blended learning environment, improve the experiences of learners?

3. The Research methodology

4.1 Introduction to Research Methodology

A research methodology is defined as “a strategy of enquiry which moves from the underlying philosophical assumptions to research design and data collection” (Myers & Avison, 2002, p.7). The strategy of enquiry for this study is presented as follows: The research question is outlined, this is important as the research methodology is aimed at providing an empirically based answer to this question. Principles underlying the development of a research strategy are considered. This is important as it helped align the mode of enquiry with my beliefs on the nature of knowledge and how it could be validly attained. My ontological and epistemological stance is made explicit as this guided the development of the research approach which is then outlined. The research method and supporting research tools and data analysis techniques are then discussed. Finally, issues such as the ethical standards of the research and the limitations of the research methodology are considered

4.2 The Research Question

This body of research was aimed at determining if a set of empirically designed implementations, in a blended learning environment, could improve the experiences of learners? The module content, contact time and learning outcomes were developed at course board level, however, the delivery of the module was moderated substantially by the empirically designed recommendations. In the case of this study, these were a set of recommendations abstracted from themes which emerged from the first phase study, were consolidated in the second phase study and reconciled with the literature. These recommendations were:

1. To provide active leadership. (Section 3.6.1 specified actions aimed at achieving this)
2. To develop an active learning community. (Section 3.6.2 specified actions aimed at achieving this)
3. To provide clear communications on module elements. (Section 3.6.3 specified actions aimed at achieving this)

The concept of improving the experience of learners was based on the perception of learners i.e. did learners perceive that the implementations improved their learning experience based on their judgement on the impact of the implementations and their previous learning experience. In answering this question involved generating and evaluating knowledge. This process is underpinned by assumptions I made regarding the nature of knowledge and the valid measurement of knowledge. These assumptions are discussed in the next section.

4.3 Principles Underlying Research Strategy Development

The research strategy had to have the potential to achieve the research objectives, to determine if the recommended actions did improve learner experience. It needed to be appropriate to the research community, a tutor endeavouring to impact positively on the learning experiences of e-learners, studying at Masters level, and considered partners in the research. Learners with the ability and willingness to reflect on and articulate important elements of their learning experience. I had to ensure that the research approach was consistent with my position on ontology and epistemology. It was vital to be explicit about the perceptions and beliefs of the nature of reality and any assumptions underpinning research outputs or measurements of reality. This helps expose and minimise the effects of preferences and biases (Flowers, 2009). The following discussion draws on (Warren & Karner, 2005; Bryman, 2004; Patton, 2002) in establishing my ontological and epistemological positioning.

4.4 Underlying Philosophical Assumptions

Underlying philosophical assumptions suggest and underpin an appropriate approach to the construction and evaluation of valid information about phenomena (Orlikowski and Baroudi, 1991). The significance for this study is that the approach to constructing and evaluating the reality of learner experiences could only be validated subject to the assumptions I adopted regarding what valid knowledge is and how it could be meaningfully explored and described.

Ontology refers to beliefs concerning the nature of the world and in the context of this research, social entities within the research field. There are two opposing world views, 'objectivism' and 'constructivism' (Bryman, 2004, p.17). Objectivism suggests that reality is objective and there to be observed as an entity external to the individual. This would suggest, according to Bryman (2004) that cultures and sub-cultures share a repository of values and customs which can be perceived, measured and described by an external entity. Constructivism on the other hand suggests that reality is continually emerging as the result of constant interaction, and cannot be understood as a phenomenon separate to those constructing it. My view of ontology is that reality is emergent, dynamic and constructed by people in unique contexts through unique emotional connections and interaction. My expectation in undertaking this study was to implement recommendations in a blended learning environment and explore an emerging reality as interactions between learners and I drive its construction.

Epistemology is the theory of knowledge acquisition and beliefs and falls somewhere between two extremities, positivism which suggests knowledge can be acquired by measuring hard facts and interpretivism which suggests that knowledge needs to be experienced and interpreted (Bryman, 2004; Mingers & Brocklesby, 1997). Following is a

brief discussion on general epistemologies. The purpose of the following discussion on epistemologies was to ensure consistency between my philosophical assumptions and the research methodology. My epistemological positioning was drawn from my view on ontology as it needed to drive a meaningful exploration of an emerging and dynamic reality.

4.4.1 Positivism

Positivists believe that the world conforms to fixed and measurable relationships between phenomena (Fitzgerald, 1998) and according to Fred & Hirschheim (2004) the positivist philosophy emphasises objectivity, repeatability and generalisability. Positivist research is concerned with testing theories of reality and establishing or rejecting hypotheses with empirical evidence derived from measurable properties of the reality under investigation (Easterby-Smith et al., 1997). The premise is that social behaviour can be studied as phenomena are studied in the natural sciences. The researcher is required to remain detached from the target population so as not to influence behaviour.

The positivist approach is aligned with the use of quantitative data in approaching the research question. Bryman (2004, p.19) described quantitative research as an approach which focuses on quantification, involving a deductive relationship between theory and research i.e. hypotheses are theoretically deduced and tested through empirical research. Data can be gathered using a variety of instruments such as structured questionnaires, structured interviews and scientific instruments. The quantitative approach focuses more on precise numerical measurements and is more suited to objectively attributing cause to effect on a statistical basis (Fitzgerald, 1998). However, while positivism is a natural science epistemology, it can be argued that it is not suitable for the social sciences. In this environment, an interpretative approach may be more appropriate (Bryman, 2004, p.13).

4.4.2 Interpretive

Williams (2000, p.210) applied interpretivism to refer to "...those strategies in sociology which interpret the meanings and actions of actors according to their own frame of reference". The term includes observation techniques, actions and language which occur within their natural setting. This frame of reference suggests a different research procedure to positivism, one that recognises distinctions between humans and the natural world. The focus is on understanding phenomena in their natural setting and using this understanding to inform other situations (Fahy, 1995). Bryman (2004, p.13) argued that interpretivism focuses on understanding human behaviour and positivism on explaining it. This focus on words and meaning involves an inductive relationship between theory and research i.e. the findings feed back into and moderate the theory. Interpretive studies are generally based on observation and narrative and align with a qualitative data approach. They use verbal, descriptive and non-numeric data such as elements of discourse which can be searched for meaning and a deeper understanding of phenomena through language (Experiment-Resources.com, 2009; Bryman, 2004, p.19).

Golafshani (2003) argued that positivism, rooted in quantitative research, implies reliability and validity, and means something completely different in qualitative research. The argument being that reliability and validity require re-definition when referred to in the context of qualitative research. He argues that reliability in quantitative research relates to the consistency of results over time, determined primarily by repeating the study and checking for consistency in the results. On the other hand, reliability in qualitative research relates to the quality i.e. how well the research explains phenomena and generates understanding. Validity in quantitative research determines the integrity of the results i.e. the degree to which the research truly measures what it was designed to measure. Golafshani (2003) argued that the term 'validity' in qualitative research should be replaced

by concepts of quality such as rigour, suggesting an exploration of concepts such as subjectivity, reflexivity and the nature of social interaction while interviewing for example.

4.5 Epistemological Assumption Selection

Interpretivism rather than positivism provides a valid set of assumptions to underpin this research for the following reasons. Firstly, there were no fixed and measurable relationships between phenomena of interest in this research. For example, learners may experience frustration because of poor communications. But that relationship is not fixed or measurable. I could only hope to develop a sufficient understanding of it. Secondly, this research was not based on objectivity. While learners were encouraged to be objective such objectivity could only be idiographic objectivity, reality perceived by the individual as it emerged from and was subject to their beliefs and life experiences. Thirdly, this research project was situated and contextualised within a distinct teaching and learning culture, could not be repeated and had limited generalisability.

While this research took an interpretative approach, the literature suggests a variety of viewpoints on the nature of social reality, whether it is something there to be objectively observed, or is it something under construction suggesting that we can observe the construction process. If we take the latter stance, it is vital to understand our relationship to observed reality and our impact on the construction of that observed reality (Alvesson and Skoldberg, 2007; Gubrium and Holstein, 1997). Patton (2002, p.79) suggested that there are no definitive categories of qualitative research paradigms and cited several perspectives. For example, Lincoln and Guba (2000) identified five traditions: positivism, post-positivism, critical theory, constructivism and participatory. Gubrium and Holstein (1997) referred to four traditions or idioms in which reality could be described: naturalism, ethnomethodology, emotionalism, and postmodernism. These embrace substantially the

varying concepts and traditions as reported by Patton (2000). Because they provided a suitable theoretical base for considering the positioning of this research, each of these interpretative idioms was considered.

4.6 Idioms of Interpretative Research

Gubrium and Holstein presented **naturalism** as the ‘predominant language’ of qualitative research (Gubrium and Holstein, 1997, p.6). Naturalism seeks to understand and describe reality in its own terms by seeing it ‘as it is’. It involves researchers getting close to their subjects and seeking rich and vivid descriptions of people and their interactions in their natural environment. Reality is understood and authenticity is established by the naturalness of the setting into which the researcher probes deeply for detail but maintains enough distance not to impact on the properties of reality or its construction.

Ethnomethodology has a focus on process, the process of creating reality through talk and interaction in a natural environment suggesting a naturalistic orientation. While the naturalist listens to, and interprets, the subject’s words, the window to reality for the ethnomethodologist is the naturally occurring conversations and activities of subjects as they construct reality (Poore, 2000). Thus, reality is seen as an on-going process rather than fixed and observable, and the aim of the ethnomethodologist is to describe the craft of construction through the actions and interactions of those constructing it. While the naturalists and the ethnomethodologists aspire to getting close to reality or reality in the making that is not enough for those who espouse **emotionalism**. Emotionalism espouses certain subjectivity in accessing the emotional internal experiences of those creating reality. Gubrium and Holstein (1997) argued that this reality is deep within and can only be reached by getting emotionally involved and developing a deep empathy with those being studied. The focus, while still on reality under construction, embraces a dimension of intimacy in trying to develop an ‘empathic’ understanding of the experiences, feelings and

emotions of those constructing the emerging reality. It also suggests adopting what Holland (2007) described as the ethics of empathy. Patton (2002, p.100) described **postmodernism** as the antithesis of enlightenment. Postmodernism suggests that there is no one discoverable truth which we can know, while enlightenment suggests that there is one accessible and discoverable truth. Postmodernism, described more moderately by Bryman (2004, p.498) as a form of sensitivity, advocated a self-awareness, necessitated by the complex relationship of the subjective researcher with a study domain from which several different accounts of reality can be drawn. Patton (2002, p. 65) suggested that the term reflexivity results from this very self-awareness, from political consciousness and the ownership one has over one's own perspective. In one sense postmodernism pushes the term interpretative towards its extreme semantically, in suggesting interpretations rather than findings, interpretations of reality rather than explanations of reality found by scientific or objective methods. Warren and Karner (2005, p.263) argued that postmodernism challenges the rights of the researcher to authoritative knowledge. Thus, the postmodernist attempts to de-privilege the account of the researcher and gives more recognition to the voices emulating from actors within the research field.

4.7 Selection of an Interpretative Idiom

The primary objective of this study was to improve student experiences. In order to achieve this it was vital to explore and report the learning practices and experiences of learners while undertaking learning tasks and engaging with learning technologies. I adopted elements of two idioms of exploration to assist with the exploration and interpretation of learners' experiences. Firstly, I believe it to be impossible to observe learners in their natural environment while undertaking learning tasks, without impacting substantially on the nature of their experiences, and that reality is emergent rather than fixed. However, neither naturalism nor ethnomethodology, as idioms of enquiry, reflected

the planned focus on emotion of the research. Sharp et al. (2005, p.3) asserted that “a holistic view of e-learning should lead to a methodology which is open ended and empowering enough to allow the learners to highlight the issues which are important to them”. Important issues gender emotion. I espouse the emotionalist view that reality under construction embraces a dimension of intimacy in trying to develop an empathic understanding of the experiences, feelings and emotions of those constructing the emerging reality. The major impact of this on the research design was twofold. Firstly, I needed to display empathy and encourage the learner to describe their emotion. Secondly, open ended methods (e.g. unstructured or semi-structured interview), which allowed me to explore emerging issues, were used. Emotionalism is the idiom which best matched my epistemological position, and the nature of the research, as it involves digging deep into learner experiences. Postmodernism is too extreme in that it implies that there are no realities rather interpretations or stories of reality. While this research was idiographic by nature, it was important to find, and understand to some degree, a common reality of learner experiences or else I could not attempt to improve those experiences.

Postmodernism does however recommend the adoption of a high level of reflexivity and self-awareness, activities which were pursued by me during the research process.

Reflexivity was pursued to maximise the benefits of the exploratory nature of the research as I developed a better understanding of the problem domain and the major issues. Self-awareness was important because of the relationship I fostered with e-learners who partnered me in the research, in particular to guard against my own shifting beliefs and convictions becoming dominant as partnerships developed.

4.8 The nature of the research

Waters-Adams, (2006, p.1) suggested action and context are central to action research in defining it as “...a practical approach to professional inquiry in any social situation”. This

research addressed a real life, in context problem, it was collaborative in nature (learners were partners in the research). It also involved continual reflection and taking actions which were evaluated for their impact on learners. This was precisely what Blumberg et al. (2008, p.366) defined as action research, a type of research increasingly used in higher education (Young et al., 2010; Nolen & Putten, 2007; Smith, 2007; Paisley and Paisley, 2004). Bargal (2008) asserted that action research is about taking actions and evaluating their impact. Waters-Adams (2006) further elaborated in presenting action research as iterations of the planning, action, monitoring and reflection processes. This research was comprised of three iterations. This involved the first phase study, the second phase study and the final phase study. The 'monitoring', 'reflection' and 'action' process elements of the second phase study were informed by the first phase study and those of the final phase study informed by the second phase study.

4.8.1 Bargal's Action Research Principles

The nature of action research was comprehensively captured by Bargal (2008) who extracted eight action research principles based on a broad range of the action research literature.

- Action research takes a systematic and at times experimental approach to addressing a social problem.
- Action research involves a spiral process of data collection, on which implementation plans and goals are based. An evaluation is carried out subsequent to implementation.
- Action research typically requires that the outcome of the intervention be communicated to all research parties.
- Researchers and practitioners are cooperative in action research.

- Action research is dependent on group dynamics and based on achieving change by mutual agreement in a transparent way.
- Action research factors in issues of values, objectives and the power needs of the research partners.
- Action research is about creating knowledge to drive informed intervention, to provide any training required and to develop mechanisms to implement intervention
- Within the action research environment recruitment, training, development and support of the change agent are emphasised.

4.8.2 An Audit of the Research and Bargal's Action Research Principles

This research was considered in light of Bargal's eight principles as outlined above. It took a systematic approach involving a first phase study, a second phase study and a final phase study, in an effort to improve the learning experience of e-learners (social problem). It also involved some experimentation. For example, learners received audio feedback embedded in text based feedback as an experiment in improving learner experiences. It included a spiral process as it involved three phases of data collection which were used to determine the actions to be taken in the final phase study. It involved the assessment and reporting of interventions. Cooperation between researcher and practitioner was assured as I filled both roles. As researcher and practitioner, I did have substantial power. This, typical of the application of action research in education, is considered further in the section on ethics. The cooperation of learners was also vital to this research, not only to engage with learning mediating technologies but to reflect on the quality of such engagements. Indeed, e-learners were asked to take a partnership approach on the basis that they were required to reflect on their experiences and articulate the impact of interventions to me. Group dynamics were also an essential element of the research as it was conducted in a social

constructivist environment with a focus on communication and cooperation. Major elements of the research environment were transparent and published on Moodle. The objectives of learners (e.g. to achieve learning tasks) were also taken into account. The interventions central to the actions of this research were primarily supplementary and aimed at positively improving the experiences of e-learners. For example the use of audio feedback to supplement textual feedback and the use of podcasts to supplement text based learning materials. Power issues were also considered, for example the power designated to me as internal examiner for the research module. This research aimed at creating knowledge for the purpose of intervention. It generated training needs. For example, it was necessary for me to undertake several training modules in Moodle. Learners also required training, for example, in creating new discussion topics in Moodle. Various e-learning tools (e.g. discussion forums, Web texts) were selected to implement the interventions. I could have been considered as a change agent, as I was involved in bringing about purposeful positive change in a practical situation. The primary purpose of this research was to improve the learning experiences of e-learners. Looking beyond this EdD study, a framework was developing within my professional environment to support positive change on an on-going basis. This research helped ensure that change would be positive. It also launched me into an iterative spiral of action research aimed at my professional development.

4.8.3 Action Research in Education

Ferrance (2000) argued that action research is particularly valuable in education because evaluating our own practices has a far more positive impact on the quality of our practice than reading about how others improved theirs. Hussein (2010) argued that this view was current in reporting a general agreement in the scientific community that action research enables practitioners to evaluate their practice and develop theories, to use reflection,

reason and creativity to improve practice. However, because action research is context dependent within one's classroom and is practitioner driven, there is also a general consensus that lack of generalisability, validity and reliability can impact negatively on credibility (Capobianco and Feldman, 2010; Waters-Adams, 2006). These issues are addressed substantially in the literature, for example (Bargal 2008; O'Brien, 2001; Ferrance, 2000; Brown, 1999).

4.8.4 The Quality of Action Research

Heikkinen et al. (2005 and 2007) presented five principles for the validation of quality in narrative action research, which are particularly applicable because of the narrative nature of this research. They argue that because the concepts of validity and reliability are based on a realist ontology, and because they lack semantic rigour, they are no longer appropriate for assessing the quality of research in education. Heikkinen et al. (2007) targeted elements which can be indicative of the quality of action research. These are presented below as considerations worthy of reflecting while undertaking action research.

4.8.4.1 The principle of historic continuity

The principle of historic continuity highlighted for me the need to understand the historical background and historic continuity to the 'social problem' I was dealing with. As a practitioner I was aware of the traditions, norms and values which moderate learner engagement, in addition to the huge pool of cultural stories which tend to define them. I was also aware that e-learning technologies are catalysts for change and the challenge is to preserve worthwhile cultural artefacts while germinating new traditions, norms and values based on the affordances of new technologies.

4.8.4.2 Principle of reflexivity.

The principle of reflexivity suggests that the incremental improvement in practice achieved through progressive iterations of the action research cycle is dependent on deliberate and purposeful reflection. Realisation of the value and vitality of continual reflection on my past values and practices ensures my professional practice can no longer be seen as a steady state but as a process of reflection driven improvement. This research project was a micro-process within that process.

4.8.4.3 The principle of dialectic.

The principle of dialectic highlights three issues for consideration (dialogue, polyphony, and authenticity). Firstly, I needed to question, how well I can develop insight through dialogue. There was a need to harvest rich and meaningful understandings through narrative research as it was the generative mechanism for knowledge in the context of this study. Secondly, I needed to consider how well I presented the voices of learners. These voices were instrumental in defining the nature of the required intervention and in qualifying the perceived improvements if any. The central role of learners as partners in the research required that their voices reflect this. Thirdly, the authenticity of the protagonists was important. From my perspective, professional integrity and the quest for truth, which was constructed in an interactive partnership drove the authenticity of the account. Learners are considered the experts in reporting on their own experiences and there is no reason to question their authenticity.

4.8.4.4 The principle of pragmatic quality.

This principle of pragmatic quality is a measure of the capacity of the research to create workable practices (Heikkinen et al., 2007). There are two elements associated with the outputs of this research. Firstly, that practices associated with the intervention have benefit

in terms of improving learner experiences and secondly that such practices can be implemented with the application of reasonable resources.

4.8.4.5 The principle of evocativeness.

The principle of evocativeness relates to the effectiveness of the research in addressing the affective, as well as the cognitive, in terms of providing a semantically rich narrative.

Owen-Smith (2007, p.48) argues that teachers in higher education have been “socialized to split the heart and the mind and thereby dichotomize the affective and the cognitive”, and that this is done out of concern. Concern that if emotion is factored in, it will impact negatively on the rigour of teaching pedagogy. However, Lou & Hue (2010) in reference to theories of cognition and emotion referred to an extensive literature which establishes the interactions between emotion and cognition. The argument is that affective issues interact with cognition to impact on attention, memory, reasoning and other cognitive functions. Lou & Hue (2010) argued the inverse with equal strength, that emotions are influenced by cognition, that for example even abstract symbols can provoke a powerful emotional response. Thus with reference to the principle of evocativeness, the quality and validity of this action research was dependent on capturing the intertwined emotional and cognitive essence of learner experiences.

Ferrance (2000) identified several types of action research in education, district wide, school wide, collaborative which involves several teachers and individual teacher. This research can be considered as the latter. She also argued that individual teacher action research generally focuses on a single issue. The issue in the case of this research was that of improving e-learner experiences by implementing a set of recommendations in a blended learning environment. The next section presents a discussion on the chosen research method which was aimed at addressing this issue.

4.9 Selection of a Research Method

The undertaking of this study was inspired by a study entitled 'JISC LXP Student experiences of technologies' (Conole et al., 2006). It was further influenced by the LEX methodology report, which reported on 'The Learner Experience of e-Learning.' Both of these studies were highly focused on the experiences of learners' with learning technologies. The studies were interpretative by nature as they elicited substantial narrative from learners on their personal experiences using ICT. While Casey (1996) presented the evidence for an upsurge in narrative research throughout the eighties, Friesen (2008) argued that despite the suitability of this type of research for investigating the impact of technology use in education, it is substantially underutilised in e-learning research. Casey (1996) established the usefulness of narrative research in attempting to understand the meaning of lived experience. She asserted that we understand our lives in narrative form, a form which endows experience with meaning. She established a context for narrative research in arguing that narrative research is one of two fundamental paradigms for studying the construction of reality. First positivism, useful for searching out universal truths and secondly, narrative-constructivism, suitable for developing an understanding of complicated and rich lived experiences which are best captured in narrative form. In implementing a narrative-constructivist approach, the LEX study adopted a recently emerging methodology called Interpretative Phenomenological Analysis (IPA). Mayes (2006, p.6) presented this narrative approach as a "method for exploring how participants make sense of their own experiences", and suggested it is so because of the following characteristics (presented in different sequence to Mayes):

- 1) It is interpretative and therefore consistent with my view of ontology and epistemology.

- 2) It is phenomenological: It elicits a detailed account from subjects on the phenomena they are experiencing, recognizing the individual as an expert on their own experience and expecting them to in an effort to enlighten the researcher. This characteristic is consistent with the selection of interpretative idiom of inquiry.
- 3) It is idiographic: Luthans & Davis (1982) describe idiographic as individual-centred, with a focus on single case experimental design applied in naturalistic environmental contexts with the application of qualitative methodologies. This qualitative research focussed on individuals in their naturalistic environment.
- 4) It is inductive: this research was inductive by nature, oriented towards exploration, discovery from which categories or patterns might emerge (Patton (2001, p.56).

These four characteristic of IPA confirmed its suitability for this study. In addition its use was endorsed by Mayes (2006) who adopted it as the analytical tool of choice for the LEX (The Learner Experience of e-Learning) study. However, it was borne in mind that IPA is demanding on the researcher's time (Madill et al., 2005) and because it draws heavily on subjects' expressions of experiences (Reid et al., 2005) it also draws heavily on learners' time. These are significant factors when determining a manageable sample size.

4.10 IPA Sample Size and Sample Selection

IPA is not an appropriate method for comparative studies or for the extrapolation of results as it normally involves a small sample size. Indeed Mayes (2006) argued that this method would increasingly be applied to single cases. It was decided however to aim for an IPA sample size of a minimum of nine. While this was considered large for an IPA sample it did help ensure that the spans of learners' experiences from good to bad were captured. In

addition, this sample size helped ensure that the interview data could be used to support the questionnaire data in developing an understanding of the class experience in general.

4.11 The Target Population

The target population for the final phase study were all GMIT learners undertaking a module called 'Research Methodology and Statistics' at Master's level. Twenty learners undertook this module, fourteen Irish post-graduate students and six foreign students. The 14 Irish GMIT post-graduate students may be described as follows:

- All had recently completed the Bachelor of Business (Honours) at the GMIT
- All achieved a grade in excess of 60%
- Four were mature students (two male and two female)
- All of the mature students had previously worked at management level in the hospitality industry

The six foreign students may be described as follows:

- The foreign students comprised of three Chinese students, two Saudi Arabian students and one Brazilian student
- All had achieved an honours degree in business or equivalent
- There were no mature students among them i.e. all undertook the master's degree immediately after completing their primary degree and all were in the 21 to 24 age group

4.12 The Research Design and the Roles of the Researcher

My role as tutor in 'Research Methodology and Statistics', and as Internal Examiner for the body of learners who undertook the module impacted substantially on the research process. Firstly my role as tutor was essential to the research design as I needed to

implement recommendations aimed at improving learner experience. It also facilitated reflexivity, for example, when some learners were not engaging with discussion forums I could take remedial action. It also facilitated me in engaging the learners as partners in the research, an approach central to the IPA research methodology adapted for this study. My role as internal examiner was unavoidable because of resource constraints. This role had the potential to impact both positively and negatively on the study. For example, one of the recommendations for improving learner experiences was that the assessment of learning outcomes be fair and transparent to learners. However, it was vital to ensure that the cooperation or non-cooperation of learners in the research did not bias the objectivity of assessment in any way. To this end, learners were presented with a highly structured and clearly defined assessment model at the outset of the module. In addition, learners were required to complete an end of module questionnaire and participate in an interview. Both the questionnaires and the interviews were administered within the first two weeks of January 2011. Learners were made aware that all assessments were completed and graded and submitted to the exam board at this stage. Therefore, the possibility of their responses influencing assessment results for good or bad was removed.

4.13 Selection of Research Tools

This research involved the use of two research tools. On completion of the final phase module, learners were requested to complete an end of module questionnaire and participate in a semi-structured interview used to explore individual learner experiences. A post-module questionnaire was used to evaluate the general experience of learners and to ensure that learners with very positive or very negative experience were invited to elaborate on their learning experiences by participating in the semi-structured interview. This was important to help understand the span of experiences from positive to negative.

4.13.1 The Final Study Questionnaire

The final study questionnaire was designed to elicit the response of learners to the implementations and to explore the general experiences of learners who undertook the final phase study module:

- **Questions one** requested the Learner's name to facilitated development of the semi-structured interview for individual learners
- **Questions two and three** explored the perception of learners on the module with reference to the ratio of the blended element to the traditional element and individual work to group work. This provided context for the finding by qualifying 'blended learning' and collaborative learning in terms of the module.
- **Question four** determined if learners would have preferred more individual work or more group work. This explored the diversity of learners' styles with reference to individual and group work. Sharpe and Benfield (2006) argued that learners undertaking similar modules have varied preferences for group and individual work.
- **Questions five and six** determined if learners perceived any advantages or disadvantages with blended mode delivery. The literature argued that blended learning offers advantages over fully online or traditional learning. (Rovai and Jordan, 2004)
- **Questions seven to nine** requested learners to comment on their expectations of the blended learning module in comparison to traditional classroom learning at the commencement and to determine if expectations were met or exceeded. This directly explored the quality of the learners experience as unmet expectations suggest a negative learning experience.

- Questions 10, 11 and 12 were Likert type, with 52 statement eliciting the learners' perceptions on efforts made by the tutor to provide active leadership, develop a learning community and provide clear communications on module elements. Table 4.1 below presents the first three statements of Q10. These statements are a sample of statements aimed at eliciting the learners perception on efforts aimed at providing clear communications on module elements. Questions 10,11,12 addressed the research question by determining if learners perceived the implementations and if the implementations improved their learning experiences.

Table 3.1: Extract from question 10

Statement	Strongly Disagree	Disagree	No Opinion	agree	Strongly Agree
I was provided with a clear outline/overview of the research methodology module					
The module overview was in sufficient detail to allow me monitor my progression through it					
The learning objectives of the research methodology module were clearly specified					

- Questions 13 to 16 elicited the opinions of learners on two major interventions, podcasts and audio feedback. The provision of audio feedback embedded in a word document providing feedback textually was innovative and aimed at improving the experience of learners.
- Questions 17 to 20 aimed at encouraging learners to reflect on their experiences, suggest how it may have been improved and to provide any additional comments.

In addition to facilitating exploration of the general class experience, questionnaires for individual learners were used to prompt questions for learners if further clarity on any issues was required to guide the end of module semi-structured interview.

4.13.2 The Semi-structured Interviews

The semi-structured interviews were administered at the end of module delivery. This could be considered as the primary research tool as its purpose was to achieve the research objectives, to determine if actions improved learner experiences. The semi-structured interview was employed as the primary data gathering tool for the research. A small number of topics or themes identified in first phase study, reinforced in the second phase study and relevant to actions taken aimed at improving learner experiences were used to guide the semi-structured interview (See Appendix D – Final Phase Interview Prompts for Caitlin). Learners were asked to comment on the impact to their learning experiences of the specific actions taken in an effort to improve their learning experiences. It was also used to elicit opinion on how the interventions may have been better implemented and to identify other possible interventions with the potential to improve learner experiences.

4.14 Sample Selection and Data Gathering

All 20 learners commencing the Masters in Business at the GMIT in September 2010 were asked to participate in the final phase study. At a scheduled module kick-off meeting on 14th September 2010, the learners were introduced to the research, issued with explanatory documentation and advised that informed consent would be requested from them should they agree to participate in the research. Informed consent was forthcoming from all 20 learners. Data gathering ensued in two stages:

- **Stage One:** Learners were requested to complete the post module questionnaire (Appendix J) on module completion. This questionnaire was aimed at eliciting information on the overall or general quality of student experiences.

- **Stage Two:** On completion of the module all 20 learners were invited to participate in an IPA type semi-structured interview. Eleven learners responded positively and participated in the end of module interview.

4.15 Ethical Considerations

Punch (1998) argued forcefully that science is not intrinsically neutral or essentially beneficial and from a brief scoping of the literature identifies the major ethical concerns of scientific research as revolving around harm, consent, deception, privacy and confidentiality of data. Kumar (2005) discussed ethical issues as they concern stakeholders in the research process, research participants, the researcher and other stakeholders such as those who commission and finance the research. The Social Research Association (SRA) identified three major criteria with reference to conducting social research: upholding scientific standards, compliance with the law and avoidance of social or personal harm (SRA, 2004). The SRA recognise that tensions can occur between these ethical principles and provide guidelines for resolving them. The difficulties of compliance with ethical standards are more complex when undertaking action research in education (Nolan & Putten, 2007). For example, learner rights must be respected. Learners need to perceive consequence free autonomy in deciding whether or not to participate in research. Questions arise as to where the boundary lies between teaching, conducting assessments and researching. In this case, the relationship between learners and I was more complex as we were partners in the research. The impact of this on accountability and the balance of power was continually reflected on to ensure that teaching practices were not compromised and that assessment remained objective and fair.

This research was sponsored by the GMIT where no strong tradition of social research and in particular research in education exists. The GMIT had adopted a general purpose ethics

policy which this research complied with. However, the British Educational Research Association (BERA) has developed a set of guidelines which are more specific to complex educational research and applicable with minimal constraints across various research methodologies and traditions (BERA, 2004). BERA advocates ethical respect for the person, knowledge, democratic values, quality and academic freedom. They set out their guidelines under the following headings: responsibilities to participants, responsibilities to sponsors of research, and responsibilities to the community of educational research.

4.15.1 Responsibilities to Participants

The responsibilities to participants include achieving voluntary, deception free informed consent with the right to withdraw from the research at any stage. Participants should be made aware of any potential detriment and incentives should be free from ill-effects. In addition the rights to privacy of participants should be respected unless such rights facilitate them in continued illegal activity. The major concern of this research was that valid and worthwhile information was gleaned from participants without causing emotional harm or emotional discomfort. This in turn was dependent on achieving informed consent from participants, which itself suggested consent based on deception free information, respect for privacy and confidentiality and not causing participants to reveal information they would prefer not to. In order to ensure that such ethical criteria were respected, the following strategy was adopted:

Informed consent was sought for all learners participating in the study. At the outset of module delivery learners were presented with an overview of the research I was undertaking and were advised that they could participate or not participate without prejudice or recrimination. In addition, just prior to commencing the interviews, learners were requested to review an email sent to them which outlined the interview process and

invited to discuss any concerns they might have regarding negative personal outcomes as a result of participation. Also, in order to manage and achieve balance in the my relationship with participants, and because I believe that digging deep into student experiences is best achieved by adopting a feminist scholarship approach, I adopted what Holland (2007) called the ethics of empathy. That is, I invested my personal identity in the interview exchange and I viewed the participants as partners in the research. The balance that had to be achieved related to the genuineness of the empathy and in ensuring that personal investment did not pressure the learners to disclose information that they would have preferred not to disclose. However, the nature of the research was not highly emotive and such an occurrence was very unlikely. Thirdly, the participants were guaranteed anonymity, and while individual experiences were recorded, I took all reasonable precautions to ensure that individual participants could not be identified.

4.15.2 Responsibilities to Sponsors

The GMIT were considered as the sponsors of this research. This is because they provided partial funding and facilitated access to participants. However, the primary interest of the GMIT was the development of staff expertise and improving the publishing footprint of the college. At the outset of this research, the GMIT did not have mechanisms in place to vet and approve or disapprove new research projects. This project was however approved and encouraged by the Head of School, the Head of Staff Development and the Research Officer. My responsibility to the GMIT was firstly to ensure that the Head of School remained informed of the nature of planned interventions. It was also important to ensure that the college was not brought into disrepute by, for example, not applying high ethical standards where teaching merged with research.

4.15.3 Responsibilities to Community of Educational Researchers

It is a privilege to be considered as a member of the community of educational researchers, a privilege which brings with it a responsibility to safeguard the integrity and strive to enhance the reputation of the community. This is achieved by conducting research to the highest possible standard. The researcher and research community can be brought into disrepute by for example falsifying data, falsifying or exaggerating findings, plagiarising content or serving self-interest above the validity of the research. It was particularly important that this research was both reliable and valid as it is aimed at informing practice, a process requiring a sure and solid foundation.

4.16 Data Analysis Techniques

Data analysis for the final phase study was undertaken at two levels. Firstly at a general level, the completed post-module questionnaires (Appendix J) were analysed to develop an understanding of the 'class experience'. Secondly, an IPA based methodology was used to guide analysis of the eleven semi-structured interviews. The timelines for the research processes are presented in Table 3.2 below:

Table 3.2: The Final Study Research processes

Date		Research Process
From	To	
15/09/2010	10/12/2010	Learners undertake final study module
05/01/2011	07/01/2011	Questionnaires administered and data collected
10/01/2011	15/01/2011	11 Semi-structured interviews conducted
01/02/2011	31/05/2011	Analysis of questionnaires and interviews conducted

The questionnaire data entry techniques and the analysis techniques applied to the data set are presented in the following section.

4.16.1 Questionnaire Data analysis

Where appropriate, all data was coded and validated on entry (Appendix E). For example, the responses to question four were coded a, b and c. On data entry, I was prompted with the question and the set of valid responses. Question one, a reference question was not analysed. Summary statistics were performed on questions two and three where the averages, modes, medians, maximums, minimums, the ranges of the data and the interquartile ranges were determined (See Appendix F). Questions four involved a count of categories. The responses for questions five and six were categorised according to themes (See example in Appendix G). Analysis of responses to questions seven and eight involved counts of pre-determined categories e.g. yes/no categories (Q8). Question nine; an open ended question involved categorising responses into themes. Questions 10,11 and 12 involved determining the count for each of five categories and mode, median, minimum and maximum count for each of the responses to 52 Likert type questions (Appendix E). A Chi-Square test for statistical significance difference of the mode was applied in cases where categorical counts were large enough (Appendix H). Questions 13, 15 and 17 involved simple categorical counts and questions 14, 16, 18, 19 and 20 elicited comments from respondents which were categorised into themes.

4.16.2 Interview Data analysis

This was used in an effort to highlight the individual learner voice and in a manner which would draw out evidence of the impact of the implementations on learners' experiences at a deep and exploratory level. Analysis of the interview data proceeded in five distinct phases: the '*post interview impressions phase*' the '*interview transcription phase*', the '*capturing the interviewee phase*' and the '*coding phase*' and the '*theme analysis phase*'. A detailed description of each of these phases is presented below.

- The '*post interview impressions phase*': This involved capturing the immediate impressions left after each interview. The purpose of this phase was to record impressions of the general disposition of the learners to the module and its delivery. These are prefixed to the appropriate transcript.
- The '*interview transcription phase*': This was aimed at capturing a high fidelity transcription of each discourse.
- The '*capturing the interviewee phase*': This aimed at developing an abstract from the discourses by adding comments aimed at capturing key phrases in the transcript and specifying their significance to the exploration. Quotes from learners, when appropriate, were included with comments, the purpose being to preserve and highlight the learner voice.
- The '*coding phase*': This involved coding comments according to their contribution to the research objectives. For example, comments which related specifically to the impact of interventions on the experiences of learners were coded 'P' to represent priority comments. When such comments suggested the impact of the intervention was positive they were coded 'PP' positive priority comments. Comments suggesting a negative impact were coded 'PN'. More general (comments which by definition do not relate to any specific implementation) were coded 'G'. General comments, when appropriate, were further classified as GP or GN depending on whether they related a positive or negative learner experience respectively. Comments that suggested future implementations with the potential to improve learner experience were coded 'F'. The primary purpose of this coding is to ensure that all comments are relevant i.e. if a comment could not be coded, then it was deemed irrelevant. The comment coding scheme is presented in Table 3.3 below. Finally comments were colour coded as a control measure, to facilitate rigour and ease compilation into the primary themes.

For example comments referring to the general experience of learners were highlighted in Grey. The colour coding scheme is presented in Table 1 below

Table 3.3: The comment classification scheme

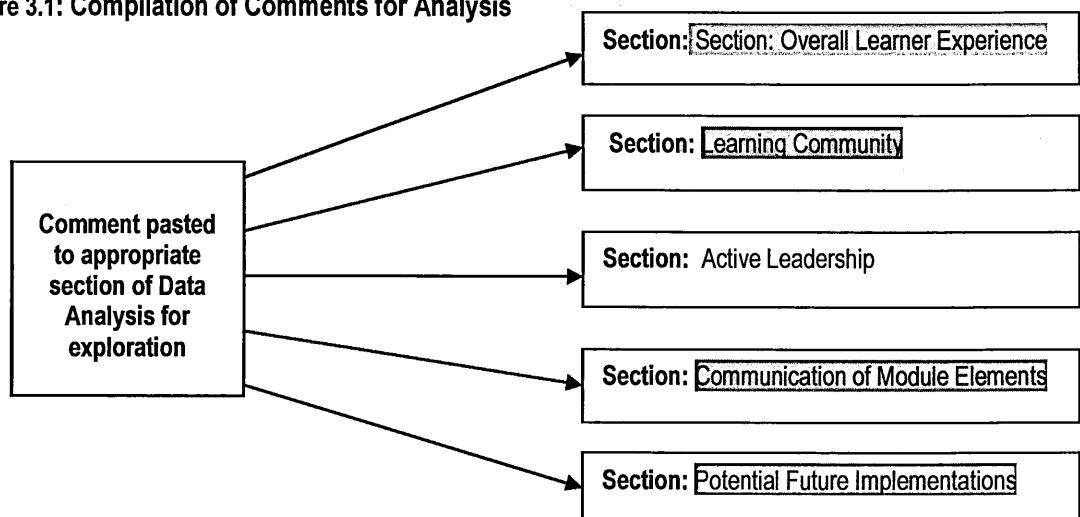
Classification	Code	Representing
Priority	P	Comments which relate to one or more of the actions/ implementation
Priority Positive	PP	Comments which give evidence that the impact of one or more of the actions/ implementation had a positive impact on learner experiences
Priority Negative	PN	Comments which give evidence that the impact of one or more of the actions/ implementation had a negative impact on learner experiences
General Interest	G	Comments which relate to learner experience
General Interest Positive	GP	Comments which give evidence that the learner had a positive experience while undertaking the module.
General Interest Negative	GN	Comments which give evidence that the learner had a negative experience while undertaking the module.
Future Implementation	F	Comments which suggest future implementation with value in it.

- The '*theme analysis phase*': Abstracted comments were copied into tables relating to the primary themes for analysis. Comments were colour coded based on the scheme presented in Table 3.4 below. Abstract from the discourse containing the comments were copied and pasted into the relevant section of the findings (See Figure 1.1below). This facilitated preservation of the learner voice and an exploration of the data within the appropriate section.

Table 3.4 Comment Colour Coding Scheme

Comment relating to	Highlight Colour
<u>Overall Learner Experience</u>	Grey
Active leadership	Yellow
<u>Active learning Community</u>	Bright Green
<u>Communications of Module Elements</u>	Cyan
<u>Future Potential Implementation</u>	Red

Figure 3.1: Compilation of Comments for Analysis



The first four stages of analysis of the interviews are presented in Appendix K. Data analysis resulted in two sets of data. Data from the completed questionnaires is presented in Appendix E which represents the data input worksheet, summarised data e.g. average, mode, median, maximum, minimum and range for questions 2 and 3. It also presents

categorical counts for the Likert type questions, 10,11, and 12 which address the learner's responses to the implementations. The primary theme tables were used to record the actions taken and the comments which record the learner's reaction to them, in addition to relevant comments coded as 'General Interest'. These tables, when cross referenced with the data sets from the questionnaires, formed the basis for a discussion of the findings. Reid et al. (2005) referred to good practice guidelines for the analysis of data. These are transparency of the results, reflexivity in interpretation and an independent audit of the results. Levels of transparency of results were enhanced by including the questionnaire analysis as conducted in Microsoft Excel and transcripts of the 11 semi-structured interviews in the appendix. The colour coding of comments in the interview transcripts also assists transparency and eases audit of results. Reflexivity in interpretation was enhanced by the partnership in research nature of the relationship between learners and I because learners could be contacted subsequent to the interviews for clarification of obscure semantics, and emerging grey areas could be explored for the purpose of reconciling the emerging interpretations of reality. The preservation of questionnaires, reports and audio recordings also facilitate an audit trail.

4.17 Summary and Conclusions

This chapter has established my ontological and philosophical viewpoint to be in alignment with the interpretative approach to knowledge generation and evaluation. In particular I espouse the emotionalist view that reality under construction embraces a dimension of intimacy in trying to develop an understanding of the feelings and emotions of those constructing reality. The nature of the research has been identified as action based and implemented using a narrative-constructivist approach. The primary research tool was the semi-structured questionnaire augmented with a questionnaire. Ethical standards were established and my responsibilities to participants, sponsors and the community of

educational researchers were discussed. Data analysis was conducted in phases using a coding scheme to highlight and abstract themes from the interview data. A set of actions aimed at improving learner experiences were drawn from the first phase study and consolidated in the second phase study and the literature. The actions were aimed at providing active and salient leadership, developing an active learning community and providing clear and precise instructions on module elements. A plan for implementing the actions was then presented. Overall, this chapter has outlined, and validated with reference to the literature, my plan to improve the experience of learners undertaking the module 'Research Methodology and Statistics'. It also presents the process aimed at highlighting and exploring the voices of learners so as to determine the effectiveness of measures aimed at improving their learning experiences.

5 The Final Phase Findings

5.1 Introduction

This action research comprised of three studies. The first phase study which evaluated the experiences of e-learners and resulted in a set of recommendations aimed at improving their experiences. The second phase study which involved eliciting the opinions of e-tutors and e-learners on those recommendations and resulted in a set of actions for implementation in the third phase study. The primary purpose of this section is to presents an evaluation of the effectiveness of the implementations which were factored out of the first and second phase studies. This section will proceed as follows. Firstly, an overview of the first phase study, including the analysis process and the findings are presented. Secondly, a similar overview is presented of the second phase study which resulted in the consolidation of the set of implementations aimed at providing an active and salient leadership, an active learning community and clear communications of module elements. The final phase study findings and the evidence they provide on the effectiveness of the implementations to improve the experiences of learners, are then presented.

5.2 The First and Second Phase Studies - Analysis and Findings

The first phase study (submitted as the EdD Pilot Study), conducted in September 2008, involved exploring the experiences of five e-learners, all undertaking e-learning modules as part of a virtual mobility programme for learners. Learners were required to submit a short report on completion of the module or modules they undertook (See Appendix B for report submitted by student four). This report identified themes for further exploration by semi-structured interview. The themes were used to develop a semi-structured interview for each learner. The five learners undertook an IPA type interview in which they were

encouraged to explore their experiences and discuss issues which they deemed to be important. The interview guide for learner four is presented in Appendix C. Data analysis involved an iterative review of the interview recordings for the purpose of identifying common themes. The analysis revealed that EVENE learners had very negative learning experiences, primarily because they perceived a lack of leadership and guidance. They also felt that communication between tutor and learner was poor and subsequently levels of motivation diminished. The top level theme emerging from this study was 'leadership and guidance (See Figure 2.1) – the study suggested that an improved provision of leadership and guidance, and the expedient use of technology to provide clear communications and improve learner motivation may have the potential to improving the experience of e-learners. The second phase study elicited the opinions of e-learners and e-tutors on these findings and any other issues they deemed important in an e-learning environment.

The second phase study participants were four learners, with previous e-learning experience, and four tutors, with previous e-tutoring experience. These eight participants undertook a semi-structured interview in which they were asked to comment on recommendations drawn from the first phase study, for example, on the importance of 'leadership' in an e-learning environment. E-learners and e-tutors were also asked to comment on any issues they felt were important to the success of e-learning. The interviews with e-tutors and e-learners resulted in 260 minutes of interview data. Analysis proceeded in a phased approach as follows:

- The '*post interview impressions phase*,' which captured the immediate impressions left after each interview.
- The '*interview transcription phase*', which capturing a high fidelity transcription of each discourse.
- The '*capturing the interviewee voice phase*', this involved filtering out key comments from transcriptions.

- The '*preliminary theme extraction phase*', this phase involved drawing themes from key comments and the surrounding discourse.
- The '*theme organisation phase*', this involved organising the emerging themes into a hierarchy.
- The '*theme consolidation phase*', this involved distilling the themes from all the interviews into one hierarchical table.
- The '*action phase*' involved drawing a number of recommendations from the themes which could be implemented in module design and delivery for the final phase study.

The theme consolidation phase involving consolidation of the first phase study themes with the second phase study themes suggested the importance of three objectives in an e-learning environment:

- The provision of active and salient leadership
- The development of an active learning community
- The provision of clear communications on module elements

The achievement of these three objectives drove the action phase of the research and resulted in a set of action for implementation in the final phase module (Section 3.6). The implementations were operationalised in the final study module 'Research Methodology and Statistics' which was delivered to learners over the course of 13 weeks commencing in September 2010. Data analysis for the final phase study was undertaken at two levels in January 2011. Firstly at a general level, 16 completed post-module questionnaires were analysed to develop an understanding of the 'class experience'. Secondly, an IPA based methodology, involving the five phases of analysis as applied in the second phase study instructed analysis of the 11 semi-structured interviews (Appendix K). The questionnaire data entry techniques and analysis techniques and the interview data analysis techniques are presented in section 4.16.

This section has presented an overview of the first and second phase studies. These studies resulted in a set of implementations aimed at implementing active and salient leadership, an active learning community, and clear communications of module elements in the final phase study module 'Research Methodology and Statistics'. The final phase study involved exploring the impact these implementations had on the experiences of learners undertaking that module.

5.3 Final Phase Study Findings – An Introduction

The primary objective of this section was to explore and develop an understanding of the experiences of individual learners by focussing on their voice and ensuring that issues and emotions articulated by them were highlighted. An IPA type methodology was applied to analysis of the interview data in order to facilitate this. IPA is not an appropriate method for comparative studies or for the extrapolation of results to other contexts because it normally involves a sample size which can be as small as one (Mayes, 2006). This is because the IPA methodology is suited to the exploration of experiences at a deep and individual level. This was the primary objective of this study. The sample size of 11 employed in this study was relatively large for an IPA sample and it was reasonable to assume that rigorous analysis would provide findings indicative of the overall class experiences. Sixteen learners, including all of the 11 interviewees completed the questionnaire which was the primary tool for evaluating overall class experiences with the interview data providing additional evidence. Likewise, the interview data was the primary tool for evaluating experiences on an individual basis with the questionnaire data providing supplementary evidence. Data analysis is presented in the next two sections. Section 5.4 presents an analysis of the end of module questionnaire highlighting significant elements for further discussion in chapter six. Section 5.5 presents analysis of the semi-structured end of module interviews. This is consistent with the exploratory drill down

nature of research and facilitates the development of a better understanding of learner experiences in general before addressing the more specific experiences of learners as they emerge from analysis of the end of module interviews. As analysis progressed, significant findings, descriptive of learner experiences and the impact of the implementations, were highlighted for further discussion.

5.4 End of Module Questionnaire Findings

The results presented in this section are based on 16 valid and completed 'end of module' questionnaires'. While 16 was a small number for quantitative data, it did represent 75% of the class and therefore provided substantial insight into the learners' general perception of the module and their perception on the effectiveness of the implementations. Analysis of the data is presented in two logical sections. The first section presents the findings regarding the learners' general perception of the module, for example the percentage of the module the class in general perceived to be delivered online. The second section addresses the research question specifically, for example, did the class perceive an active and salient leadership, participate in an active learning community and perceive that module elements were sufficiently communicated to them?

5.4.1 Learner Perceptions on General Elements of the Module

This section presents the questionnaire findings on learners' perceptions of the following module elements:

1. The percentage of the module delivered online
2. The percentage of learning achieved in group work
3. The advantages and disadvantages of the module being delivered in blended learning mode

4. The learners' pre-module expectations compared to their actual experiences
5. The learners' perception of ease of access to learning materials on Moodle.

5.4.1.1 The percentage of the Module Delivered Online

When asked to estimate the percentage of the module delivered online and the percentage of the module delivered in the classroom (Q2), the average response was 57% online and 43% classroom (Appendix E). This suggests that learners perceived the module as delivered in blended mode with substantial dependence on both the traditional and online elements of delivery. This compares reasonably with module design which aimed at achieving approximately 50% of the intended learning in the classroom with 26 hours of face to face activities.

5.4.1.2 Individual vs Group Work

On average, learners felt that 69% of learning was achieved individually and 31% in group work (Q3). The range of responses varied from 30% individual work to 100% individual work (Appendix E) suggesting that learners had some control over their levels of group engagement and exercised flexibility according to their predominant learning style, or that they understood the module differently. However, it is more likely that learners exercised flexibility because the interventions aimed at communicating module elements clearly and precisely would have reduced substantially the probability of learners understanding differently what was expected of them. Some level of collaboration was mandatory because of the requirement on learners to review the work of peers. However, greater levels of collaboration were encouraged rather than required. For example, learners were encouraged rather than required to engage with discussion forums. While the range of the responses spanning 30% individual work to 100% individual work was substantial, the eight learners in the interquartile range (Appendix F) provided a response range of 50%

individual work to 80% individual work, spanning only 30% suggesting a small number of learners outside of this range, not quite outliers but who far more than the average learner preferred to work alone and tended to work alone even on group projects. This was substantiated by the fact that only one learner would have preferred more individual work, two more group work and 12 of the 16 learners were happy with the proportion as it naturally transpired from module design (Q4).

5.4.1.3 Blended Mode Delivery– Advantages and Disadvantages

Overall, learners felt that learning in blended mode offered advantages over studying traditionally as 14 of the 16 learners specified advantages while only four specified disadvantages.

Table 5.1: Count of most occurring valid responses

Please specify, in order of significance, three advantages, in undertaking the research methodology module in blended mode, as opposed to studying the module traditionally	Most significant Advantage	2nd most significant advantage
Time independence	5	0
Ease of access to resources	4	6

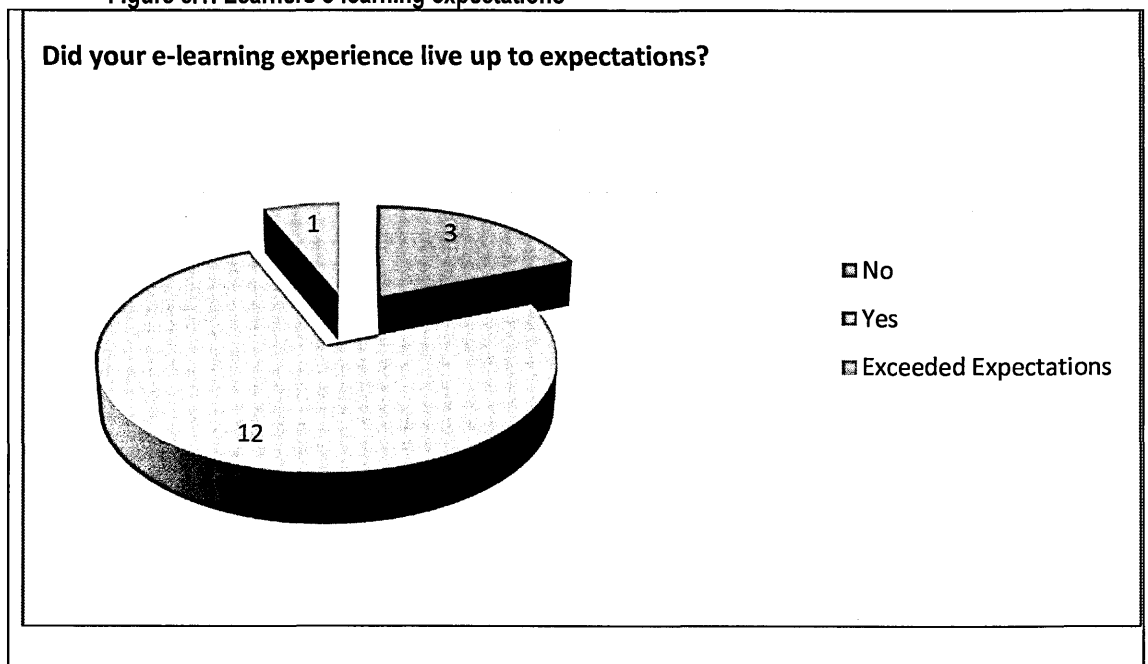
The two advantages featuring most, ‘time independence’ and ‘ease of access to resources’ were identified by learners as the most significant and the second most significant advantages. Neither of these factors were indicated by learners in the ‘third most significant’ category. However, it is clear from above that ‘ease of access to resources’ for various reasons, preparation for class, revision etc., identified by 10 of the 16 learners as offering an advantage was more significant than ‘time independence’, which was specified by five learners only. While four of the 16 learners specified disadvantages, two related to information overload on Moodle, one suggested that blended mode delivery offers less

interaction with the lecturer and one suggested that statistics needs a more personalised environment.

5.4.1.4 Pre-Module Expectations

Learners were asked (Q7) to reflect on and compare their pre-module expectations of blended mode delivery with their post-module experiences (Figure 5.1 below). Results were mixed with four learners expecting their experience to be more positive than the traditional classroom, six expecting it to be more negative and six expecting it to be the same. Of the 12 learners who reported that their experience lived up to expectations (Q8), ten of these were expecting a similar or more positive e-learning experience. When asked to comment (Q9) on their expectations and actual experiences, two of the four who indicated that their experiences did not live up to expectations provided comments which suggested they misunderstood the question as one reported that it surpassed expectations and the other passed positive comments on the usefulness of blended mode delivery.

Figure 5.1: Learners e-learning expectations



5.4.1.5 Ease of Access to Learning Materials on Moodle.

Responses to question 10 (k to o) inclusive were analysed to help determine the level of ease with which learners could access learning resources on Moodle. As Table 5.2 below indicates, there was general learner satisfaction with access to information on Moodle where 15 respondents agreed or strongly agreed that they found it easy to access the learning resources on Moodle. The same percentage found it easy to navigate through the learning resources on Moodle and agreed or strongly agreed that the hyperlinks in Moodle worked well. In addition 12 found the textual elements in Moodle clear. In contrast, six learners found Moodle cluttered and only four disagreed and while it seems reasonable to assume that clutter would have a negative impact on access to resources and navigation through resources, such was not the case.

Table 5.2: Learners experience of Moodle

Q: Please indicate your level of agreement or disagreement with each of the following statements regarding the research methodology module.						
Statement Number	<u>Statement</u>	Total Counts (Mode Highlighted)				
		Strongly Disagree	Disagree	No Opinion	agree	Strongly Agree
10k	I found it easy to access the Moodle learning resources for the research methodology module	0	0	1	6	9
10l	I found it easy to navigate through the learning resources on Moodle for the research methodology module	0	1	0	8	7
10m	The hyperlinks in Moodle worked well for the research methodology module	0	0	1	11	4
10n	The meaning of textual elements in Moodle were clear for the research methodology module	0	1	3	9	3
10o	Moodle seemed cluttered to me when I logged on to the research methodology module	1	3	6	6	0

This phenomenon is considered further in the discussion.

Table 5.3 below presents a summary of the findings from this section:

Table 5.3: Summary of questionnaire findings on general experiences of learners

1. Learners perceived the module to be delivered in blended mode with slightly more focus on the online element than the classroom element.
2. Learners perceived the ratio of individual work to group work to be 2:1. Individual learners exercised substantial flexibility in this.
3. 'Ease of access to resources' and 'time independence's were identified by learners as the most important advantages of blended learning delivery over the traditional mode of delivery.
4. Almost all respondents found it easy to access class notes on Moodle.
5. A little over one third of all learners found Moodle cluttered

Findings one and two are descriptive of how the learners' perception of the nature of the learning environment and finding three expresses the advantages they perceived it to offer. Finding four and five relate to phenomena which can impact on learner experience and will be discussed in light of the primary evidence ensuing from the interviews.

The results from this section, while not related directly to the interventions, suggest that the module design, aimed at achieving a blended learning environment with 50% of learning to be achieved in the classroom and 50% online, was successful. In addition collaborative learning was perceived by learners to account for one third of overall learning suggesting the presence of an active learning community to at least some degree. Although learners found Moodle cluttered, they did perceived ease of access to learning materials on this learning platform, a positive result in light of efforts to provide clear and precise communications of module elements. The next section reports the findings on questionnaire elements aimed specifically at evaluating the effectiveness of the interventions.

5.4.2 Learner Response to Interventions

Responses to questions 10, 11 and 12 of the questionnaire were used to evaluate the overall class response to the interventions aimed at providing salience of evident and active leadership, an active learning community and good communication of module elements. The counts of responses and the percentage of responses in each category are presented in each table, e.g. Table 5.4 below. Each table row contains the statement number, the statement, and a count of categorised responses. The maximum total count for each statement is 16. The highlighted number in each row represents the mode. All statements were of a positive nature. For example, where statements refer to an element of active leadership; agreement with the statement suggests more salience of active leadership and disagreement less. The following sections reports on the responses relating to salience of active leadership, an active learning community, and communications of module elements respectively.

5.4.2.1 Salience of Active Leadership: The Learners’ Perceptions

Active leadership relates to the efforts of the tutor to provide active and visible leadership throughout the module delivery. Seventeen statements were designed to elicit the opinion of the learners on statements indicative of their perceptions of ‘salience of leadership’, and three on the provision of feedback. A summary of the findings is presented in Table 5.4 below.

Table 5.4: Responses to statements indicative of salience of leadership.

Q: Please indicate your level of agreement or disagreement with each of the following statements regarding the research methodology module.						
Statement Number	Statement	Total Counts (Mode Highlighted)				
		Strongly Disagree	Disagree	No Opinion	agree	Strongly Agree
10f	The research methodology lecturer communicated enthusiasm for the module	0	0	0	11	4

10g	The research methodology lecturer communicated high expectations to me while undertaking the module	0	0	0	11	3
10p	I found the research methodology lecturer easy to contact while undertaking the module	0	0	0	11	5
10q	I felt the research methodology lecturer was aware of levels of online participation during the module	0	0	1	8	7
11b	I found it easy to approach the research methodology lecturer with problems while undertaking the module	0	0	1	7	8
11c	The research methodology lecturer adopted a friendly tone	0	0	0	6	10
11d	The research methodology lecturer adopted a supportive tone	0	0	1	7	8
11e	The research methodology lecturer responded quickly to questions	0	0	1	7	8
11f	The research methodology lecturer pointed me towards new and emerging materials	0	0	1	8	6
11g	If the lecturer was unavailable for a period of time I had enough learning resources to continue progression through the module	0	0	2	7	6
11h	The research methodology lecturer communicated the value to participating in discussion forums	0	0	2	8	6
11i	The research methodology lecturer communicated the value of participating in an active learning community	0	0	2	7	7
11j	The research methodology lecturer communicated the expectation that I engage with discussion forums	0	0	2	9	5
11k	I felt the research methodology lecturer was monitoring activity on discussion forums.	0	0	1	10	5
11l	I felt the research methodology lecturer encouraged non contributors to contribute to discussion forums	0	0	4	7	5
11m	The research methodology lecturer encouraged the class to get involved in study groups to prepare for exams	0	0	1	6	6
11p	I was encouraged to get involved in study groups while undertaking the research methodology module	0	0	4	5	3
12b	Personal feedback was provided when the required learning outcomes were not achieved	0	1	4	6	4
12c	Personal feedback was provided when the required learning outcomes were achieved	0	0	2	9	4
12d	Feedback was provided in a reasonable time while undertaking the module	0	0	0	10	5

12e	I was very important to me to receive timely feedback while undertaking the research methodology module	0	0	1	9	5
12f	The lecturer was aware of student needs during the course of this module	0	0	1	7	7
12g	The lecturer was responsive to student needs during the course of this module	0	0	1	7	7
Totals		0	1	32	183	134
Percentage		0%	0.3%	9.1%	52.3%	38.3%

The data was not analysed for significant statistical difference across the five categories as the category count for the combined categories of ‘strongly disagree’ was not sufficiently large to allow valid statistical testing. Indeed 91% of responses were in the ‘agree’ category or the ‘strongly agree’ category. This table suggests the perception of learners that the tutor was easily contacted, approachable, aware of learner needs and supportive. Responses to Question 12e indicated that 15 learners agreed or strongly agreed that it was important to them to receive timely feedback while undertaking the module. This suggests that the interventions which focussed on providing improved levels of feedback were worthwhile and improved learner experiences. One mechanism for achieving this was the provision of audio feedback.

Audio feedback on research proposals was provided to learners. This was embedded in the research proposals which were submitted and reviewed in Microsoft word. Embedded audio was intended for listening to as the learner read through attached comments on the reviewed research proposal. Learners were asked if they found this useful (Q15), and to comment on their answer (Q16). Fourteen learners found the audio feedback useful and the two learners who did not find it useful provided no explanatory comment.

The 12 comments relating to audio feedback varied substantially making categorisation difficult. Also some comments referred to two characteristics e.g. ‘easier’ and ‘clearer’. Table 5.5 below summarises the comments with care not to lose meaningful information.

This table indicates that the provision of audio feedback was a positive implementation for 12 learners at least.

Table 5.5: Comments on usefulness of audio feedback

Key words or nature of comment on audio feedback	Count
Highlighted required changes/provided in-depth feedback/Step by step/Extremely useful guidelines for progression	4
Easy to understand/clearer	3
Useful when used in conjunction with research proposal	2
Interesting/novelty	2
Could access any time	1

Overall the findings indicate that the class in general perceived an active, persistent and encouraging leadership resulting in a positive learning experience. Table 5.6 below presents a summary of the findings which will be considered further in the discussion.

Table 5.6: Summary of Questionnaire findings on salience of active leadership

1. High levels of active and salient leadership were perceived by learners. (10f,10g,10p,10q,11e – 11m, 11p 12,f,12p)
2. The disposition of the lecturer supported good interpersonal relationships with learners. (11b,11c,11d,12f,12,g)
3. The class in general felt that the provision of feedback was adequate and timely (12b,12c,12d)
4. Interventions which provided timely feedback improved learner experiences (12d,12e)
5. Audio feedback improved the experience of learners

Table 5.5

5.4.2.2 Active Learning Community: The Learners' perceptions

The statements referring to an active learning community had two broad objectives. Firstly to explore the learners' perceptions of efforts made by the tutor to foster an active learning community, and secondly, to explore if learners felt that they engaged with an active learning community. Table 5.7 below presents a summary of the data on 'perceptions of efforts made by the tutor to foster an active learning community'.

Table 5.7: Active learning community - perceptions of efforts made by the tutor

Q: Please indicate your level of agreement or disagreement with each of the following statements regarding the research methodology module.						
Statement Number	Statement	Total Counts (Mode Highlighted)				
		Strongly Disagree	Disagree	No Opinion	agree	Strongly Agree
10i	I was aware of the value of engaging in an active learning community while undertaking the module	0	1	0	9	6
10j	I was aware that I was expected to engage in discussion forums while undertaking the research methodology module	0	0	0	10	6
11p	I was encouraged to get involved in study groups while undertaking the research methodology module	0	4	4	5	3
12i	The module was designed to encourage collaboration with other students on learning tasks, projects etc.	0	1	2	8	4
12j	The tutor encouraged collaboration with other students on learning tasks, projects etc.	0	0	4	4	5
Totals		0	5	10	36	24
Percentage		0%	6.7%	13.3%	48.0%	32.0%

The categories 'Agree' and 'Strongly Agree' were combined into the category 'Agree/Strongly Agree' and the categories 'strongly disagree', 'disagree' and 'no opinion' were combined into the category 'All Other Categories' (Table 5.8).

Table 5.8: Active Learning Community - Combined Categories

Agreed/Strongly Agreed	All Other Categories
60 (80%)	15 (20%)

This facilitated testing the counts for the category ‘*Agree/Strongly Agree*’ and the category ‘*All Other Categories*’ for a statistically significant difference using the Chi-Square goodness of fit test for equal proportions. The null and alternative hypotheses were formulated as follows:

Ho: The classification counts are not statistically different
Ha: The classification counts are statistically different

The null hypothesis was rejected in favour of the alternative hypothesis at a very high significance level of .001 (Appendix H). Indeed 80% of responses were in the ‘*Agree/Strongly Agree*’ or category. However, the fact that 20% of learners had no opinion or disagreed suggests that the tutor may need to review mechanisms and increase the effort to persuade learners of the value of participating in an active learning community. Table 5.9 below, which presents a summary of the data on indicators that learners perceived themselves as engaging with an active learning community, provides further exploration of this theme.

Table 5.9: Active learning community - the engagement of learners

Q: Please indicate your level of agreement or disagreement with each of the following statements regarding the research methodology module.						
Statement Number	<u>Statement</u>	Total Counts				
		Strongly Disagree	Disagree	No Opinion	agree	Strongly Agree
11n	There was a sense of intimacy among learners in the research methodology class	0	2	7	5	2
11o	I felt part of an active learning community while undertaking the module	0	3	0	9	4
11q	I discussed solutions to problems with other learners while undertaking the module	0	1	2	11	2
11r	Networking and sharing with other learners was important to me while undertaking the module	0	1	2	9	3
12k	Collaboration with other students on learning tasks, projects etc., improved my learning outcomes	0	2	2	7	4

	Totals	0	9	13	41	15
	Percentage	0%	11.5%	16.7%	52.6%	19.2%

The data was reorganised into two categories as presented in

Table 5.10 below

Table 5.10: Active learning Community - Combined Categories

Agreed/Strongly Agreed	All Other Categories
56 (72%)	22 (28%)

This facilitated testing the categorical counts for a statistically significant difference between the category counts using the Chi-Square goodness of fit test for equal proportions. The null and alternative hypotheses were formulated:

<p>Ho: The classification counts are not statistically different</p> <p>Ha: The classification counts are statistically different</p>

The null hypothesis was rejected in favour of the alternative hypothesis at a very high significance level of .001 (See Appendix H), indeed 72% of responses were in the 'Agree/Strongly Agree' category. However, there was not a consensus in the class that there was a sense of intimacy among learners i.e. of the 16 responses to that particular statement (11n), seven agreed while only two disagreed and seven had no opinion. However, 13 did feel part of an active learning community and 13 felt that collaboration with other learners improved their learning outcomes. This suggests that a sense of intimacy among learners may not be necessary for effective collaboration or for a sense of belonging to an active learning community.

The evidence presented in this section suggests that interventions aimed at developing an active learning community resulted in improved learning experiences. Table 5.11 presents a summary of the findings on efforts made to develop an active learning community. These findings are considered further in the discussion.

Table 5.11: Summary of questionnaire findings on active learning community

1. The perception of the class in general was that the tutor fostered an active learning community. However, it is possible that this not appreciated by some learners and consideration should be given to making a more explicit effort.	(10i,10j,11p,12i,12j)
2. Most learners felt part of an active learning community; however efforts of the tutor to foster an active learning community could be improved upon.	(11n,11o,11q,11r,12k)
3. Students felt that collaboration among learners improved learning outcomes	(12k)

5.4.2.3 Communications of Module Elements: The Learners' perceptions

There were seven statements eliciting the opinion of the learner on communication of module elements (Table 5.12).

Table 5.12: Learners perceptions on communications of module elements

Q: Please indicate your level of agreement or disagreement with each of the following statements regarding the research methodology module.						
Statement Number	<u>Statement</u>	Total Counts				
		Strongly Disagree	Disagree	No Opinion	agree	Strongly Agree
10a	I was provided with a clear outline/overview of the research methodology module	0	2	3	7	4
10b	The module overview was in sufficient detail to allow me monitor my progression through it	0	3	1	10	2

10c	The learning objectives of the research methodology module were clearly specified	0	0	2	9	5
10d	I was communicated clear instructions on achieving the learning tasks of the research methodology module	0	1	2	9	4
10e	A fair assessment scheme for the assessment elements of the module was communicated to me	0	0	1	7	7
11a	A fair assessment scheme for the research methodology module was communicated to me	0	0	0	10	6
12a	Instruction for achieving learning tasks were provided clearly	0	0	2	10	3
	Totals	0	7	11	62	31
	Percentages	0%	6.3%	9.9%	55.9%	27.9%

The data was reorganised into two categories, an '*Agree/Strongly Agree*' category and an '*All Other Responses*' category.

Table 5.13: Combined Categories - Communications of Module Elements

Agree/Strongly Agree s	All Other Response
93 (84%)	18 (16%)

This facilitated testing the counts for the category '*Agree/Strongly*' category and the category '*All Other Responses*' for a statistically significant difference using the Chi-Square goodness of fit test for equal proportions. The hypotheses were formulated:

<p>Ho: The classification counts are not statistically different</p> <p>Ha: The classification counts are statistically different</p>

The null hypothesis was rejected in favour of the alternative hypothesis at a very high significance level of .001 (See Appendix H). Indeed 84% of responses were in the '*Agree/Strongly Agree*' category suggesting that the implementations regarding the communication of module elements were successful with perhaps some room for improvement. For example, responses to the first statement (10a) referring to the

communication of a module overview suggest that five respondents had no opinion or disagreed that they were provided with a clear module overview. Eleven of the 16 respondents agreed or strongly agreed with the statement while two disagreed. Three learners felt that they did not have a sufficient module overview to monitor their progress through the module (10b).

The responses to the remaining five statements (10c to 12a) have only one response in the ‘disagree’ category, suggesting general satisfaction with the communications of learning objectives, instructions on achieving learning tasks and a fair assessment scheme.

The final implementation aimed at clearly communicating module elements relates to the use of podcasts to communicate instruction on achieving learning tasks. Podcasts were placed on Moodle for the purpose of providing instructions on conducting statistical analysis and explaining the significance of results. Learners were asked if they found these useful (Q13) and asked to comment on their response (Q14). The podcasts worked for 14 of the 16 respondents and each of the 14 indicated that they were useful. Some learners identified two factors in one comment, for example one response suggested that podcasts helped to ‘better understanding’ and were ‘more dramatic than ordinary courseware’. Table 5.14 below presents a summary of the comments and indicates the general thrust of learner comments on the usefulness of podcasts.

Table 5.14: Comments on usefulness of podcasts

Key words or nature of comment (Question 18)	Count
More dramatic than ordinary courseware	1
Helped make things clearer/improved understanding/ helped learn	8
They were beneficial/Useful, innovative/made learning less formal/own pace	7

No comment	2
------------	---

The findings from this section are summarises in Table 5.15 below:

Table 5.15: Summary of Interview Findings on Communications of module elements

1. The perception of the class in general was that module elements were communicated well.	(10a-e, 11a,12a)
2. The evidence suggests that further consideration should be given to communicating a module overview and ensuring learners can monitor their progress through the module.	(10a,10b)
3. Learning objectives, instructions on achieving learning tasks and a fair assessment scheme were communicated well to learners	(10c-e, 11a)
4. Learners felt that use of podcasts improved their learning experience.	(Table 5.14)

What can be gleaned from this summary is that the learners found podcasts useful, in particular at helping them to better understand concepts such as the normal distribution (mentioned specifically by some learners). While a picture is emerging from the questionnaire data which suggests that learner experiences were improved, there is evidence that further improvement is possible. The following section presents the opinion of learners on this and any other issues they deemed to be important.

5.4.2.4 Learners' perceptions on improving their learning experiences

The final three questions, 18, 19, and 20, requested learners to:

- 1) Comment on how their learning experiences may have been improved (Q18)

- 2) Comment on any issues, factors or considerations respondents deemed important to the successful completion of the module (Q19) and finally
- 3) Provide any additional comment respondents felt relevant to the study (Q20)

The purpose of these questions was to determine, from the learners' perspective, firstly if any other major issues were overlooked in the interventions. Secondly, if any particular interventions were important to the successful completion of the module and thirdly if there were any other issues, positive or negative, that the learners would like to voice. Thirteen of the 16 respondents provided one or more comments on how their learning experience may have been improved. The most common response (four learners) suggested that more online learning and less class work would have improved their learning experience. Three learners were very satisfied with the experience as it was. Two learners suggested that statistics and research methodology should be delivered as separate modules. Four learners provided seven comments relating to factors they deemed as important to the successful completion of the module. Five comments referred to Moodle, one of these to Moodle in general and four to discussion forums. These comments are presented in Table 5.16 below.

Table 5.16: Factors important to successful completion of module

Key words or nature of comment (Question 19)
Moodle and Discussion Forums All the courseware are on Moodle, easy to review and prepare (Qn. 1) Engagement with Moodle – much relevant material on-line (Qn. 13) The sample answers on Moodle (in discussion forums) were of great benefit towards the end... (Qn. 10) Engaging with Moodle, forum (discussion) is essential in successful completion or research methodology course (Qn. 14) The discussion forum is a wonderful approach, unfortunately the students were all very busy in the first semester and this more or less influence the practicability of this approach (Qn. 1)

General

The lecturer is easy-going, and easy to contact

The two modules (research methodology and statistics) are complimentary

Question 20, inviting the learners to provide any additional comments drew six responses.

Two learners recommended that statistics and research methodology be presented as separate modules. One suggested scheduling the research proposal presentation for a less busy period. Another suggested allocating marks for engagement with Moodle. One learner described the module as “innovative, highly interesting and highly relevant” and with reference to the on-line element said “it certainly made the learning experience more enjoyable”. The final learner said ‘Thanks Kevin for everything’. These responses relate to six out of 16 learners and may not reflect the general class experience. However they did indicate that the interventions had the potential to provide an enjoyable and positive learning experience and provoke gratitude from learners. A summary of the findings is presented in Table 5.17 below.

Table 5.17: Summary of findings on improving learner experiences and other issues

1. Learners’ experiences were positive and potentially enjoyable.
(Responses to Q18)
2. Five learners would have preferred more online learning and less classroom learning.
(Responses to Q18)
3. Learners found Moodle of great benefit in particular because of access to learning materials and the use of discussion forums.
(Responses to Q19)
4. Module delivery had the potential to provide a very positive learning experience.
(Responses to Q20)

The significance of these findings are that learners had positive learning experiences. Also, in considering how their learning experiences may have been improved, no suggestion was made that any major issue was overlooked in the interventions. The findings, as summarised in Table 5.17 above will be considered further in the discussion. The next section presents the findings from the interview data.

5.5 Analysis of the Interviews: Compiling the Evidence

This section is aimed at further highlighting the voices of 11 learners who articulated their experiences as partners in the research. Analysis commenced with the ‘post interview impression phase’ which was conducted directly after each interview. It continued with the ‘transcription phase’. The process of highlighting the voices of learners commenced when key passages, sentences and phrases were abstracted from the transcripts in the ‘capturing the interviewee voice phase’. The ‘*Compiling the Evidence*’ phase which follows was aimed at organising the interviewee voice evidence in such a manner that conclusions could be drawn as to whether or not the implementations were successful in improving the experiences of the learners. This section will firstly focus on evidence relating to the class experience in general. Subsequent to this, evidence relating to the primary themes; ‘*active leadership*’, ‘*active learning community*’, and ‘*communications of module elements*’ will be compiled by filtering out and associating learners comments and abstracts with the theme and the action they refer to. Finally, comments which may inform on-going practice by suggesting mechanisms for improving learner experiences will be discussed under the heading ‘*Future Potential Implementations*’.

5.5.1 The General Experience of learners

Learners were asked to comment on their overall learning experience. A representative sample of responses is presented in Table 5.18 below.

Table 5.18: Positive comments on learning experience

<p>It's impressive, ye I think it's good. (Fred, 11/01/2011)</p> <p>Oh highly positive, highly positive, very much so... like the blended learning mode and certainly met my expectations. I didn't at all feel uncomfortable with it and once you had the Internet you could work on it at home...the podcast on the normal distribution, it was very good so, eh, it was innovative, it was very good, it was, so it was it was a good module . (Brian, 10/01/2011)</p> <p>...if I learnt one information from you I would say thanks a lot, but... because I've learnt lots of things it's hard to know how I should appreciate you or how can I appreciate you, but in general it was useful, really really useful. (Hesham, 10/01/2011)</p> <p>At the start I was kind of wondering why are we doing this? I don't see the relevance but then towards the end I saw the relevance in it and how it would help our thesis progress and be better and the statistics and all that. Ye, I think it was very positive. (Maeve, 10/01/2011)</p> <p>Very good (overall learning experience). (Olive, 11/01/2011)</p>

Table 5.18 above is absent of negative comment as all learners reported a positive learning experience. In addition, the disposition of Aishling and Coleen towards statistics went from one of initial fear to really liking (reported under findings on active learning community as both learners attributed the transition to this concept). The evidence suggests that overall learner experience was positive. However, when learners were asked if they found Moodle cluttered, substantial comment ensued on how this e-learning platform impacted on their learning experience. In keeping with the exploratory and reflexive nature of the research, a representative sample of these comments is presented in Table 5.19 below.

Table 5.19: What learners said about Moodle?

<p>I found when I would have gone on to your Moodle page it was like oh my God, so much you know it was so much information there altogether it was kind of where to start. (Coleen, 12/01/2011)</p> <p>When they're all up there, and there's four or five different articles for the same topic, you're like, I won't even bother looking at any of them, like you know ... (James, 14/01/2011)</p>

... it was hard sometimes to get a little motivated because, you're like, you kind of put it off... because, now, there is so much stuff here that it is hard to get through it all so your kinda like I'll leave it for another while and go back to it so it is a little off putting, the amount that's on it...there was so much to read but it was out pretty neat enough. I mean easy to follow. (Catherine, 13/01/2011)

...you found it a bit daunting at first when you opened it. There was so much to read but it was out pretty neat enough. I mean easy to follow. So, I liked Moodle, I think it is a good way of learning. (Maeve, 10/01/2011)

...it was the most useful... (Catherine, 13/01/2011)

...overall e-learning worked very good and all the forums and everything it was clear and you could find everything on it so it was really good. I can't really give any bad feedback on it. (Olive, 11/01/2011)

No, I think it was clear, I mean you divide it into 10 chapter...When I want to look for something I just go to each chapter. (Fred, 11/01/2011)

...some of the class have never really interacted with IT...but everything was done under sections, you had them all outlined...and everything that was in each section...you could still access only what you wanted, you know, it was all up there ...and I think it is actually good to have it all up at once, because for some people...progressing further, want to look on, you know, and I think that may be holding people back as well if you only put up a certain amount at one time. (Aishling, 11/01/2011)

I found Moodle very good...I mean you put up worked examples, particularly coming up to the exam I found it very good for revision purposes accessibility...there were no snags...I found it good I found access to it good and I found the content very good too and very relevant and easy to and easy to understand (Brian, 10/01/2011)

...after facing the Moodle, I feel 'twas clear you were close to us and you were empowering us so I feel...the Moodle it was useful so I think so yes... (Hesham, 10/01/2011)

Table 5.19 above suggests that some learners experienced frustration while engaging with Moodle. For example Coleen found it difficult to know where to start because of the amount of information on Moodle. James also found Moodle cluttered and suggested that this reduced his motivation substantially to engage with it. He did feel however that the content needed to be 'up there', suggesting that clutter was inevitable. Maeve found

Moodle a bit daunting but neat, easy to follow and she liked it. This suggests perhaps that on engagement, Maeve did not find content on Moodle as daunting as it seemed. Catherine likewise found Moodle clutter but neat, easy to follow and useful, suggesting contradictory experiences. Fred, Aishling, Brian and Hesham had no problems with Moodle, indeed Aishling suggested that the perception of clutter on Moodle came from lack of engagement. Table 5.20 below presents a summary of the findings from this section.

Table 5.20: A summary of interview findings on general class experiences

1. All learners voices indicated an overall positive learning experience (Table 5.18)
2. The learners' voice on their experience of Moodle suggests that some learners did experience de-motivation and attributed to the large quantity of information posted on this learning platform. However, overall learners found Moodle clear and useful. (Table 5.19)
3. The approach of learners to learning may influence their perception of what constitutes clutter in an e-learning environment. (Table 5.19)

While learning experiences were positive overall, the results highlight the importance of addressing the issue of perceived clutter on any learning platform. The findings as summarised in Table 5.20 above will be considered further in the discussion.

5.5.2 The Learners Voice on Active Leadership

This section reviews the comments relating to the implementation of active leadership. A total of 19 references to active leadership were identified in the transcripts. These were used to explore a critical question in light of the interventions taken: did learners perceive an approachable and pervasive tutor presence? The learners' perceptions of active leadership implementations were evaluated by the nature of the learners' response to the action taken. To illustrate this, consider the action 'get learner mobile numbers to facilitate the sending of group texts'. The learners' perception of this measure was better explored by evaluating the learners' response to the use of group texting, for example, to provide

feedback to learners or inform learners of the subject matter of the next lecture.

Representative samples of the comments are presented in Table 5.21 below. All interviewees commented positively and suggested that they perceived an active leadership. Brian perceived accessible leadership and although Maeve never took advantage she felt the tutor was available to everybody. Aishling gave testimony to high levels of active leadership as did Coleen.

Table 5.21: The perception of active leadership

I felt very comfortable; I think you were very accessible. You were perceived by the young people in the class as being very accessible very fair, giving very good advice and it was obvious to them that you took an interest in them and their welfare. That was very much appreciated...eh I thought the leadership given and the care that the tutor had for the class, I thought that was remarkable and very much appreciated. (Brian, 10/01/2011)

Ye, well you always made sure that if we needed anything to let you know. (Maeve, 10/01/2011)

Without a shadow of a doubt if there was anything, and we all said it, and me personally, I never at any day throughout the whole course that my questions weren't answered or that I couldn't approach you, or there was nothing, there was no stone unturned basically in anything that we had to do, there was online, you were constantly, any comment that was made any part of our proposal em, when somebody commented you were on the ball giving your feedback and you were constantly interacting with us, constantly, on a one to one and as a group and... that's across the board that the class have said that, we couldn't ask for more help and I think that's hugely important that as a student you are able to feel that the lecturer is approachable and that there is, you know, no issue that you have outstanding that you are afraid to address, you know... (Aishling, 11/01/2011)

...you know and I always felt your door was always open that if I had any problem, be it with the research proposal or with statistics, you know that you were here em... (Coleen, 12/01/2011)

But the text message, it's very personalized as well like, you kind of, if you have a query then it's so easy to get back to you'. (Michael, 13/01/2011)

...well, we received plenty of texts off you, you know, that's not something that other lecturers like, em, it is good, ye, it's a good way of being, getting up to date, and communicating what's going on... (James, 14/01/2011)

All other comments were of a similar nature and suggested the learners experienced a high salience of leadership. The use of mobile texting may have been instrumental as Michael refers to texting as personalised and James as a good and novel mechanism for communicating in the learning environment. The primary mechanism for developing a pervasive presence of leadership was through the provision of general and individual feedback to learners. The following section presents evidence of the impact of this on learners' experience.

The Learner's Perception of the Provision of Feedback

The most prominent actions aimed at providing learners with adequate feedback were as follows:

1. Use of communication technology to provide continual feedback to the class.
2. Provision of speedy and potentially useful individual feedback to learners.
3. Providing a speedy response to questions – a time was aside each working day to respond to questions posted on forums.

Several mechanisms were used to provide feedback to learners: one to one consultations, mobile texting, email, discussion forums and the comment tool in Microsoft Word in conjunction with audio feedback which was embedded in each reviewed document. The module 'Research Methodology and Statistics' involved learners developing a research proposal for the module 'Dissertation' which they were required to undertake the following Semester. Learners formally presented their research proposals (using PowerPoint) to a group of 15 potential dissertation supervisors and received immediate feedback. General comments: Learners were asked to comment on their levels of satisfaction with the overall levels and speed of feedback. A sample of learner comments on feedback in general is presented in

Table 5.22 below. These comments relate to the learners' perceptions on the adequacy of feedback and of the specific mechanisms used to provide feedback: mobile text, audio and feedback from potential supervisors following the presentation of research proposals by learners.

Table 5.22: Levels of satisfaction with general feedback

Ye, definitely (adequate) ... (Maeve, 10/01/2011)

...you got back to us straight away gave us pointers. (Michael, 13/01/2011)

So feedback in general would have been better than average I think for a module, and you got immediate feedback from stage one once you put in your draft one, and unless they were asleep could not have not got feedback. (Brian, 10/01/2011)

Top class, top class, absolutely brilliant. (Aishling, 11/01/2011)

...sufficiently adequate for learners to be aware of their progression. (Michael, 13/01/2011)

... you are only lecturer who, you text, you communicate with us and I think that is very convenient and we can get feedback immediately. I mean you used the text that means it's more convenient and quicker than communicate just by email... (Fred, 11/01/2011)

I thought it was hugely important, I think it motivates you, and this feedback it motivates you and you kind of know where you stand and it's brilliant to know where you are going wrong and it's all obviously constructive criticism. (Aishling, 11/01/2011)

...and it's hugely important. I don't know how some of the younger students feel about it but, you know, as part of the mature group for me it's huge, it's hugely important. (Coleen, 12/01/2011)

All comments¹ regarding the provision of feedback were positive and the evidence suggests that personal feedback was good and speedy, immediate and pervasive, and important to learners. This will be discussed further in the next chapter.

Mobile Texting: Group texts were sent out to learners to inform them of the topic of the next lecture, for example, or to provide a short comment on submitted work. A sample of these comments is presented in Table 5.23 below:

Table 5.23: Learners perception of the use of mobile texting

... I did yes, because I forget an awful lot of things anyways myself you so it's good to have reminders and know, and they're also an attractive way of communication, so you still feel as if there is one and one communication between yourself and the lecturer. (Catherine, 13/01/2011, when asked if she found texting useful)

But the text message, it's very personalized as well like, you kind of, if you have a query then it's so easy to get back to you. (Michael, 13/01/2011)

... you are only lecturer who, you text, you communicate with us and I think that is very convenient and we can get feedback immediately...it's more convenient and quicker than communicate just by email... (Fred, 11/01/2011)

All comments relating to the use of mobile texting were positive and the evidence suggests that text messaging was useful in establishing and enhancing communications and tutor presence. It may be useful for informing and prompting learners in a convenient and perceived personalised manner.

Embedded Audio: Audio comments were inserted into the reviewed research proposals submitted by learners in Microsoft Word. Table 5.24 below presents a sample of responses from learners when asked about the usefulness of this intervention.

¹ These comments are highlighted in turquoise in the transcript of the interviews - see Appendix K

Table 5.24: Learners Perception of Audio Feedback

<p>...it makes it more personal like someone cares about you during work so I think it was really, really good. (Olive, 11/01/2011)</p> <p>...and I think that and the feedback, initial feedback from the proposal that we got em, we listened to online, I think that was brilliant, it was consuming from you, from that point of view but on a one to one it was hugely beneficial, hugely beneficial because you could play it back, play it back, take it step by step. (Maeve, 10/01/2011)</p> <p>...very good... worked brilliantly...very clear...a good idea... It was useful because... you would still have the proposal in front of you and be able to go through it... (Caitlin, 12/01/2011)</p> <p>I found it extremely useful. That was the first time I got actually audio feedback and it was great, because I was able to print out off my thesis myself and when you were talking I was able to highlight as I was going along what you were saying and what the em, recommendations you had on the sheet actually I found it really, really good, ye. (Catherine, 13/01/2011)</p> <p>...ye, like I had to listen to it a few times, and pause it, and I'd write things down like, that kind of a way but...well it would have been important if I had followed it. (James, 14/01/2011)</p> <p>... it was useful, em, and important... (Hesham, 10/01/2011)</p> <p>I think that is great. It is easier to understand, I mean easier learn, just a simple writing feedback. (Fred, 10/01/2012)</p> <p>Is it actually that simple when you sat down in a group and started to do it in a group? And you discussed it in the group it just became clearer you know so. (Coleen, 12/01/2011)</p>
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All learners responded positively suggesting that the provision of audio feedback improved learning experiences. Learners seemed to engage with the audio repeatedly. It may be that it makes learning 'easier' as Fred said and perhaps this is because as Catherine said, one could listen and take notes at the same time.

Oral presentation of research proposals: Each learner presented their research proposals to a body of potential research supervisors and received immediate feedback. Table 5.25 below presents the comments from learners on their perception of this measure:

Table 5.25: Comments on oral presentation

...there were eh good replies it helped me to help my research proposal and the research idea. (Hesham, 10/01/2011)

It was good, just to narrow down my topic a little bit, but I think ye, definitely it prepared you because I think before everyone in class was kind of terrified, you know, going in front of all the lecturers and in the boardroom. It stood to us all so it did. (Michael, 13/01/2011).

I'd say it really wasn't until after we had our presentation there in front of the board after that the thesis became more real. (Michael, 13/01/2011)

When I went into the second session that afternoon, I could see exactly where the questions were coming from. You know, you could see where people were making mistakes and you could see where you would have even made mistakes in your own one...and I think that is good for us going forward as well, you know I think, well the one thing I have learnt from it you know is I would definitely my thesis before I hand it in, I would give it to several people to read, and I wouldn't you know if somebody came back with criticisms on it, you wouldn't take it as a personal thing, you know, you would go back and you would look at it all again and you would see if it can be improved and where it can be improved you know, its always nice to have you know another pair of eyes on your work you know and obviously the more... (Coleen, 12/01/2011)

Well I think that that was, would be an example of general feedback because we all sort of participated. We all learnt from that. As the day progressed we became more aware of you know, oh this person is going to get it... (Caitlin, 12/01/2011).

All learners saw the research proposal presentation with immediate feedback as a positive and useful experience. Hesham felt that comments from potential supervisors were good and helped him with his research proposal. Michael highlighted the possible value of the presentation in helping learners develop a focus. Coleen felt the session changed her approach as afterwards she 'definitely' would review her own work and seek critical feedback from others. While it was intended to provide individual feedback, it seems it also became a source of general feedback for some learners. In suggesting that all learners participated, Caitlin hinted at the value of the presentation in enhancing the sense of an active learning community as was evident on the day when learners were observed in group discussion on their presentations and outcomes. Although the presentation increased the workload, the voice of learners suggests that it improved their learning experience.

Table 5.26 provides a further abstraction and a summary of the findings on active leadership.

Table 5.26: A summary of interview findings on active leadership

1. Learners perceived an active and approachable tutor presence. (Table 5.21)
2. The evidence suggests that personal feedback was good and speedy, immediate and pervasive and important to learners. (
3. Table 5.22)
4. The evidence suggests that text messaging was useful in establishing tutor presence and enhancing communications. It may be useful for informing and prompting learners in a convenient and perceived personalised and novel manner. (
5. Table 5.22, Table 5.23)
6. Audio feedback improved learner experiences perhaps because one could listen repeatedly and take notes at the same time. (Table 5.24)
7. Learner presentation of their research proposal with immediate feedback improved their learning experience perhaps by improving their focus on their research question and convincing them of the importance of critical review. (Table 5.25)

The data suggests that learners felt there was active and salient leadership driving the module. This was achieved primarily through communications, both face to face and IT mediated. In particular communications technology was used to provide continual general feedback to the class, to provide speedy, and potentially useful, individual feedback to learners, and to respond quickly to questions and queries.

5.5.3 The Learners Voice on an Active Learning Community

The module was designed to encourage interaction and collaboration among learners. From the outset learners were encouraged to get involved in study groups and collaborate in solving problems in statistics. Virtual elements of the class interaction were substantially

designed into the module. There were two elements to this. Firstly, learners were required to post their research proposals to an online discussion forum and have them reviewed by two of their peers. In addition each learner was required to review two research proposals. Secondly, a number of statistical problems were posted online and learners were required to post their solutions and discuss methods used with other learners. The learners' voices on their perception of these implementations, in developing an active learning community, are presented in Table 5.27 and Table 5.28 below. Comments presented in Table 5.27 may refer to the face to face activities (e.g. group meetings) or virtual activities (e.g. discussion forums) while comments recorded in Table 5.28 refer specifically to discussion forums. This is appropriate as the use of discussion forums was the primary online mechanism aimed at developing an active learning community.

Catherine saw group work as “extremely useful” and suggested a comradeship in the class as there was interaction between everyone and a willingness to help one another. Maeve felt likewise, that there was class interaction with various opinions which helped “sort out what you think” suggesting opinions were shared and argued as learners negotiated a common meaning.

Table 5.27: The learners' voice on an active learning community

but others found that (group work) extremely useful as well because there was interaction, you know, between everybody so there was, you know, so everybody was willing to help each other as well... (Catherine, 13/01/2011)
As in did the whole class interact with one another? Ye, ye there was a lot of different opinions obviously but that's the only way of learning really, everyone having a different opinion and being to sort out what you think. Ye, ye, the class was fine. (Maeve, 10/01/2011)
... when it came close to exam time we were all helping each other out so ye, there was a good community overall. (James, 14/01/2011)
...so if I won't understand it is worth to work with a group, someone can explain. (Olive, 11/01/2011)

I would say not so much a community where there was a lot of interaction between everybody, I would say that there were a lot of little communities, tiny groupings within the class. I would say that there were as many as five or six out of the 18 or 19. (Brian, 10/01/2011)

Coleen: Oh, absolutely (felt part of an active learning community). (Coleen, 12/01/2011, on feeling part of an active learning community)

Oh hugely important (to be part of an active learning community), hugely important particularly where the, where the stats were concerned...we would have come together on a number of occasions and sat down, and you know, tried to reason things out and, you know, on some occasions I sat with the girls...and you kind of just say, is that it like? Is it actually that simple when you sat down in a group and started to do it in a group? (Coleen, 12/01/2011)

I felt I mastered it, and I felt if I had to do it again, or if there was a choice, like you know, we had in third year and 4th year you pick some of your modules, it's not a choice I would have made but if I was to do it now it would be a choice I would make. (Coleen, 12/01/2011)

...we all had our own little meet..., our own groups... (Aishling, 11/01/2011).

...by God did we really work brilliantly together (Aishling, 11/01/2011)

wow did I get into it and I went from actually disliking it to feel probably my favourite subject out of all of them... (Aishling, 11/01/2011, in reference to group work).

it's hard so sometimes you need to be your own self so I will just break this barrier so sometimes you are behind your friends so you need to engage your friends so they will just let you feel easy. (Hesham, 10/01/2011)

James felt this phenomenon arose close to exam times when they all helped each other. Olive who preferred to work alone felt group work was useful when she encountered concepts she could not understand. Brian did not see the class as an interactive whole. Rather he witnessed the emergence of several informal groups. However, in addition to improving learners' experience, with more effective mechanisms for achieving learning tasks such as solving statistical problems, it seems that actions taken to develop an active learning community had the potential to impact more profoundly by boosting learner confidence and motivation. Coleen, who initially lacked confidence and felt fearful of

statistics, totally changed her perception of the module as it became her favourite subject. Aishling suggests that everyone in the class had their own groups and that it worked “brilliantly” for her. Indeed she suggested that this changed her attitude towards the module from one of dislike to possible her favourite. Hesham felt he needed to work alone at times to break new ground but needed friends behind him at other times, suggesting that he had the option to work alone when it suited and with friends when it suited. The evidence presented in Table 5.27 above and the total absence of negative comments suggests that learners perceived and engaged with an active learning community. Table 5.28 below presents evidence of the importance of discussion forums in achieving this.

Table 5.28: The importance of discussion forums to learners

I think it was just easy say for example if you weren't...actually in the college or for example in the house and you had a problem, you could just write it down. I have a problem with this or with this question and someone would actually respond to you, in an hour maybe, in a half an hour but you would get that response and you wouldn't have to actually go on the phone to someone asking and you don't actually know if they will know the answer ... I think it was very good. (Olive, 11/01/2011, on the benefits of discussion forums)

I think so, other students also taught me how to solve some questions, and I want to mention about the discussion forum on Moodle, I think that was very useful, you know one time I just tried to do a question about probability, and I found Brian and Maeve, they said, oh you be very good, and also, Brian is very, I don't know how to say this, Brian is very eager to do all the course and we all put some comments...you know what I am saying. (Fred, 1/01/2011)

...getting the correct solutions and seeing how others were thinking. (Brian, 10/01/2011)

...mental acuity would not be as strong as younger learners' and 'not alone were you getting the correct solutions but you were also seeing the way other people were thinking. (Brian, 10/01/2011)

...then there would be one in a class that figured it out and then you'd be looking at their answers and someone could leave a comment saying why did you do this... and that did definitely help. (Michael, 13/01/2011)

Olive saw discussion forums as a convenient mechanism for getting solutions to problems quickly from other learners. Fred also used them to learn how to solve problems and

commented on the willing support he got from other learners. Brian felt they were useful as a mature learner both in seeing how other learners solved problems and how they were thinking. Michael felt they were useful for getting critical comments on his own work and solutions to problems. Efforts to develop an active learning community evidently did improve learner experiences. However, comments presented in Table 5.29 below suggest that learners' attitudes toward the use of discussion forums may not have been straight forward. Hesham concurred with Fred when he suggested that marks should be allocated for engaging with discussion forums. In addition, Caitlin felt the value of peer reviews was dubious as it tended to be complimentary rather than critical.

Table 5.29: Active learning community - The peer review process

Oh ye, well we were very busy you know we have to sacrifice something. (Fred, 11/01/2011)
Actually there was like a barrier for starting then it became easier so something easy actually, ...what I suggest...give few marks little like 5 marks for each student but one topic eh and for replies so it will be 5 marks so then he will just break this barrier...I was studying most of my studies for the exam was from the system, from the Moodle, so I think it's important and the students need to break this barrier as fast as possible. (Hesham, 10/01/2011)
And there was very little time for us to engage with Moodle, you know, it was very hard because we had long deadlines and em... (Caitlin, 12/01/2011)
...well I think most of it was 'Oh ye it's very good, continue along as you are' so I think maybe that we are not used to you know. Giving our peers critical feedback, you know you do not want to hurt people's feelings ...do you think that, that that was helpful because I was looking at them everybody was very very complimentary (with a laugh)... I think the other as well probably for myself I wouldn't feel that I'd have the em, you know that I would be capable of criticising someone else's proposal, you know. (Caitlin, 12/01/2011, on the value of peer review)

She further suggested that learners did not have the necessary skills to provide feedback on research proposals. A summary of the findings is presented in Table 5.30 below:

Table 5.30: A summary of interview findings on active learning community

1. Learners felt part of an active learning community and this improved their learning outcomes.

(Table 5.27)

2. Engagement with discussion forums improved learning outcomes. However learners need to see explicit and tangible benefits to encourage participation.

(Table 5.28)

3. The peer review process needs to be formalised as learners require more specific instruction on achieving this learning task. This is a module element which requires more specific definition and more explicit instruction for learners.

(Table 5.29)

It is clear, that while the class did experience an active learning community, and that such a community improved learners' experiences substantially, the peer review process necessitates that learners have the required ability to provide critical comment, and that this be provided without undue concern for its personal impact on the receiver.

5.5.4 The Learners Voice on Communications of Module Elements

Learners involved in the first study phase of this research were extremely frustrated and demotivated because of a lack of communications with module tutors. In particular, module elements such as instructions on achieving learning tasks caused severe frustration. The importance of providing clear and precise information to learners was further highlighted in the second study phase resulting in the following implementation in the final phase of the research:

- 1) The communication of a module overview with sufficient detail to facilitate the learner in monitoring their progress through the module.

- 2) The communication of clear and precise learning objectives.
- 3) The communication of instructions for achieving learning tasks.
- 4) The communication of a fair assessment scheme.

The perceptions of learners on the effectiveness of these elements are discussed below.

The communication of a module overview

A two hour face to face induction session aimed at delivering a detailed module overview was delivered to learners. This was augmented with a module syllabus and information on the various module topics on Moodle. Learners' comments on the provision of a clear module overview are presented in Table 5.31 below:

Table 5.31: Communications of module overview

Oh ye, well it's always very important to get an overview of what's to come and I did feel em, you know, that we got em a very good overview of what was involved in the course and I would have been happy enough with that... (Coleen, 12/01/2011)

Em, monitoring it (progress) myself I'm not so sure about because was just kind of thrown at us from all the other modules...I would have found it difficult to keep on top of you know monitoring everything I was doing. (Coleen, 12/01/2011)

I think it was overall good. (Olive, 11/01/2011, in reference to the module overview)

Ye, well, we saw what it entailed alright. (James, 14/01/2011).

Oh ye, there was a lot of information available on Moodle, online. It was very detailed and everything, so we knew exactly what we were getting into. (Maeve, 10/01/2011)

...we knew what, where we were going, you presented us with, you know, plenty of information that we knew where we were, we knew what to focus on and we knew em, you outlined basically the course and what was, how it was broken up and each of the particular em parts to that. (Aishling, 11/01/2011)

I think the Moodle was actually better and more useful' because "when you go home and you have more time to sit down and actually take on the issues. (Michael, 13/01/2011)

I think it is good, of course I mean during our first class you learn me to use Moodle, all information is in Moodle and I don't know how to say...I think we can do a preparation job before, we know what we are going to learn for next class during our first class I really know what the whole class looks like. (Fred, 11/01/2011)

I feel 'twas clear you were close to us and you were empowering us so I feel even the system itself, the Moodle it was useful so I think so yes, I agree... (Hesham, 10/01/2011)

...once we were aware of what we had to do it was quite clear what was expected of us then. (Catherine, 13/01/2011)

Coleen felt she had a good overview of the module and that this was important to her. However, she felt that there was so much thrown at them from the various modules that she could not keep up with monitoring her progress. Olive felt the module overview was good. James, although he could not remember the details, saw what the module entailed. Maeve felt the induction session was quite detailed and like James saw what the module entailed. Aishling echoed Maeve's words and felt that she knew what to focus on. Michael appreciated the role of Moodle which facilitated him in identifying the important issues and addressing them. Fred reinforces this and felt that the module overview on Moodle helped him prepare for classes. Hesham also highlighted the importance of Moodle and felt the information provided was empowering and resulted in learners feeling the closeness of the tutor. Catherine felt a little confused at first, but quickly learned what was expected of her.

Learner voices highlighted the importance of Moodle in preparing learners by communicating the module overview at the outset of the module and continually throughout its progression. While the face to face induction session was indeed useful, it does seem that a synergy existed between it and the supporting materials on Moodle. It seems that learners didn't really take it all in on the day, probably as Coleen said, because so much was thrown at them on the day, and as Michael said that when he went home and

sat down he took the issues on board. The major lessons from learners' comments are that the provision of a module overview was important to them, and they felt that it did improve their experience, and that this element of module delivery benefits substantially from the use of a virtual learning environment such as Moodle.

The communication clear and precise learning objectives

The learning objectives were presented textually in Moodle with the introduction to each topic. Learners were directed towards them in face to face sessions and by email or group text subsequent to commencement with the respective topic. Learners' comments on the provision of clear and precise learning objectives are presented in Table 5.32 below:

Table 5.32: The provision of clear and precise learning objectives

The learning objectives were clear, I mean there were a structure to it you know, the material was put up on Moodle. (Brian, 10/01/2011)
I suppose in fact for exam purposes I had to form some sort of selection. (Brian, 10/01/2011)
Ye (when asked were learn objectives clear and precise) ... (Hesham, 10/01/2011)
Very well (learning objectives communicated)... (Olive, 11/01/2011)
Ye, of course, it is all (learning objectives) clear. (Fred, 11/01/2011).
Most definitely, most definitely...I've never left the room as in any doubt as what I, what I felt I had to do... (Aishling, 11/01/2011)
it was gone through step by step and an easy example was taken first and then it was developed into a more advanced level... we weren't thrown in at the deep end at the start on any up and coming modules we had to cover especially research methodology. So it was structured well. (Catherine, 13/01/2011)
'Well, we were well informed on eh, what we had to prepare for our thesis, the research proposal and so on. Eh, we were also well informed about the, eh, what was required in stats as well... (James, 14/01/2011)

Brian felt the learning objectives were structured and clear. He did however find them daunting but had enough information to be pragmatic and make a strategic selection. Hesham felt the learning objectives were clear, but would have liked more examples in statistics to allow him achieve them. Olive and Fred felt that learning objectives were well communicated. Aishling felt that she had no doubts about what she had to do. Catherine felt the learning objectives were presented and addressed in a step by step manner. James felt that the class in general was well informed in research methodology and statistics

The evidence suggests that learners felt that their experience was enhanced through the emphasis placed on communicating clear and precise learning objectives. For Brian, it helped him make his exam selection. For Catherine it meant not being thrown it at the deep end. James felt he was well enough informed to prepare for his thesis.

The communication of Instruction on Achieving Learning Tasks

The primary learning tasks facing learners was the development of a research proposal and mastering a number of statistical techniques. Learners were provided with a comprehensive guide for developing their research proposal. The steps involved in the various statistical techniques were demonstrated in class and a number of podcasts were provided for each test. This was considered to be the primary intervention. The evidence of learners' perceptions of these measures are presented in Table 5.33 below:

Table 5.33: Instruction on achieving learning tasks

Oh, I felt that (podcasts) was very good, really good, eh, that was fantastic, you know for revising. They were very helpful. I found once you got, you know, on your own with your laptop and you went through them maybe a couple of times and they seemed to just click, they were clear. Ye, they were very to the point. (Caitlin, 12/01/2011)
Absolutely (improved her results), definitely, yes, ye. (Caitlin, 12/01/2011)
Yes, do you know you put up something there like those little videos that I think are very very short and to the point and I found them very very good. (Aishling, 11/01/2011)

Many of these videos were produced by a nice projection em and it was like em easy to be repeated em it was produced eh eh with good drawing and clear drawing and if any point is not clear it is easy just to go back a few seconds to repeat it again so eh my view I think it was useful, really useful and actually I advise to use it with many subjects not just research methodology could be useful for any other subject (Hesham, 10/01/2011).

Very important, they changed completely the way you learn and I think you find more knowledge using different things than books. (Olive, 11/01/2011)

Ye, that video is very very useful. Actually, because of my language barrier, I can't, maybe I can absorb about 40% of knowledge in you class but you know like, so before exam, actually just two weeks before exam I don't know how to do the questions of statistics so I just learn by myself and use the video on your Moodle and it's very detailed and it taught me how to do this questions and I think it's very useful and you see I think I be very good. (Fred, 11/01/2011)

Ye, I found that the podcasts were very helpful on Moodle so they were, because it gave you time, because sometimes when you're in the class environment it's very difficult when you have a large group of people to follow it step by step, but then when you are able to do it individually it's an awful lot easier because you have to keep going over it sometimes to become more familiar with it, but once you have time to do that with the podcasts then it was quite helpful. (Catherine, 13/01/2011)

I think, you know the way you placed links online, you'd look and then even by the video links, I think that that helped an awful lot. It was kind of, you could pause it and work out one stage and then go back to it...you learn better because your actually practicing you're not kinda... I found, especially with lecturers, especially when you're doing statistics if you have got a lot of like literature, you would look, its daunting, you know when you go back... so definitely ye, the Moodle links and all that that's probably the best way to go about it. (Michael, 13/01/2011)

Ye, the podcasts were good like eh, they were kinda simple uncomplicated ways a looking and learning... I suppose, I think that anyone that made use of them, had positive things to say about it like... (James, 14/01/2011)

I didn't view them that much, right. I relied more on sitting down in a group, you know, with three or four of us that were struggling with different questions and I found you know, going through it that way was better for me. (Coleen, 12/01/2011)

Caitlin saw value in podcasts and described them as fantastic for revising, very helpful, clear and to the point. She also felt that they were instrumental in improving her results.

Aishling's perception was similar to Caitlin as she found them short and to the point. Hesham felt the podcasts were very useful for instructions on achieving the learning tasks. He clearly saw their value in the clarity with which they presented the instructions and because he could replay them. Olive felt she could glean more knowledge from podcasts than books and attributed them to a complete change in her approach to learning. Fred who is Chinese found video particularly useful because of the language barrier he experienced. He said that he could absorb about 40% of what was covered in class so the podcasts facilitated self-learning. Catherine felt the podcasts were of value because she could engage with them repeatedly on a one to one basis whereas sometimes in a class environment she found it hard to follow step by step instructions. Michael felt podcasts helped "an awful lot" and used the pause button as he viewed them. James found them an uncomplicated way of learning, suggesting perhaps that they provided a convenient learning mechanism. Coleen, who shied away from information technology whenever possible, did not use podcasts very much. She preferred to sit down with a group of learners to work through problems. The evidence suggests that the use of podcasts improved learner experience. It would seem that they provided a learning mechanism which learners found convenient and easy to use. Podcasts helped one learner overcome a language barrier, and therefore provided substantial support to this learner in mastering module elements.

The communication of a fair assessment scheme

The assessment scheme comprised 50% for statistics and 50% for a submitted research proposal. A grading scheme was devised for the research proposal which involved marking each section out of 100 and applying weights to the appropriate sections (see Appendix I). Learners were presented with the grading scheme and subsequent to grading were provided with a breakdown of where they achieved the marks. Comments relating to the learners perception of the assessment scheme are presented in Table 5.34 below:

Table 5.34: The communication of a fair assessment scheme

Well first of all you gave very clear, I mean for the research proposal, I mean, you did give a very clear marking scheme to the class... I thought it was very fair, absolutely it was fair. (Brian, 10/01/2011)

Actually I remember you taught us about the assessment scheme. It was clear for first half of the Moodle (research methodology element) so you clarified it early which made us to feel fine. My own self actually I felt fine you mentioned it early stages. (Hesham, 10/01/2011)

Now it was broken down fairly so everyone knew what they should be doing. (Maeve, 10/01/2011)

Ye the breakdown of the marking scheme, ye I thought that was very good, ye that told us a lot more about what we expected I suppose through the module. (Caitlin, 12/01/2011)

It (clarity of the assessment scheme) was very important. (Olive, 11/01/2011)

Yes, it was fair, very fair, because, em, with regard to other modules, we were given a report or different various things we had to do and we're not clear ideas of where the majority of marks are going for, but with this you are able to tick off as you were going along, do you know, I have addressed this question, I have addressed each part of it so I thought it was a very fair method of... (Catherine, 13/01/2011)

... it kind of narrows it down, how much effort and work had to go into that topic like. (Michael, 13/01/2011).

...and it's good to know that like you know, what area you should be putting more into...' He also described it 'as a kind of a template like for your, for your proposal like. (James, 14/01/2011)

I did ye, oh, I fully understood it and I thought ye it was very fair and I think it was very well done you know cause I think if it was just left and you had to hand in a research proposal on a specific date you know the tendency were there to kind of push things out whereas we were doing a little bit sort of each week and I thought you know the fact that we had to present as well, that was very good. (Coleen, 12/01/2011)

Brian felt the assessment scheme was very fair while Hesham appreciated the clarity and perceived fairness. Maeve felt it was broken down well and that everybody knew what they should be doing. Caitlin felt it informed learners of what to expect as they undertook the module. Olive thought the marking scheme was clear and that this was important to

her. It was also important to Aishling because she felt she had “put a lot of work into it”. Catherine felt the assessment scheme was clear and fair and highlighted an advantage in that she could tick off the various assessed elements as she achieved them. She also saw an advantage over other modules where learners are expected to present a report but have no idea what the majority of marks are going for. Michael felt it narrowed down his work while James saw it as a type of template for his work. Coleen suggested that the assessment scheme helped her maintain focus on the learning task by encouraging her to do a little each week on her research proposal.

A summary of the findings on communications of module elements are presented in Table 5.35 below:

Table 5.35: Communications of module elements – Summary of Interview Findings

1. A module overview is important to learners at the outset to prepare learners for what the module involves and what is expected of them.
(Table 5.31)
2. Learner voices highlighted the importance of Moodle in preparing them by communicating the module overview at the outset of the module and continually throughout its progression.
(Table 5.31)
3. While the face to face induction session was indeed useful, it does seem that a synergy existed between it and the supporting materials on Moodle which provided more detail on module content.
(Table 5.31)
4. Learning experiences were enhanced through the emphasis placed on communicating clear and precise learning objectives.
(Table 5.32)
5. The use of podcasts improved learner experience by providing instructions on achieving learning tasks and providing a learning mechanism which learners found uncomplicated suggesting they were convenient and easy to use in supporting learners to master module elements.

(Table 5.33)

6. The provision of a clear and a fair assessment scheme improved the experience of learners by allowing them focus on module element which they felt offered the best assessment rewards and by implicitly providing learners with instructions on achieving learning task.

(Table 5.34)

All learners felt that the class was provided with a clear and a fair assessment scheme and the evidence suggests that the intervention was successful in improving the experience of learners. The grading scheme was not only useful in insuring learners that they were graded fairly, but as some learners used it as a guide for developing their research proposals, it did to some degree fulfil the role providing instruction on achieving this particular learning task.

5.6 Future Potential Implementations: Compiling the Evidence

The focus of analysis so far has been to explore and evaluate the experience of learners in light of the implementations. However, action research is an iterative process where each evaluation triggers further actions with the potential of improving outcomes, in this case the experience of learners. This section draws primarily on the data analysis, presented in the preceding sections to factor out issues which suggest future implementations.

Section 5.4.2 concluded that learners in general reported a positive learning experience and found Moodle clear and useful. However, it did conclude that some learners experienced de-motivation because of the clutter on Moodle. From the outset of the module, all topics

and module resources were published on Moodle. The resulting volume of information impacted on the experience of learners while engaging with online materials. Some appreciated access to all the online learning resources and others would have preferred to have only current information available. This suggests that making content collapsible may improve the experience of learners on both sides of the divide. A simpler approach may be to colour code topic headings according to whether they are past, current or future. However, there are also pedagogic issues which will be considered further in the discussion.

Section 5.5.3 concluded that learners need to see tangible benefits to encourage participation in discussion forums. This suggests that the contribution of learners to discussion forums should be evaluated and graded or be instrumental in improving their grades in another manner. In the case of this study it was mandatory for each learner to use discussion forums to provide peer reviews to other learners on their research proposals. The value of this approach was drawn into doubt by Caitlin (Table 5.29) who felt incapable of reviewing the work of her peers and suggests that rather than providing critical reviews learners paid lip service to the task as the priority was not to hurt anybody's feelings. What is clear is that any future implementation would need to ensure that learners were provided with more specific instructions, for example specific questions to answer relating to the work of their peers and that the value of the exercise be made explicit for both reviewers and reviewed. The evidence also suggests that because the use of mobile texting impacted so positively on the experience of learners it may be worthwhile to explore the possibility of embedding a Web based texting technology in Moodle. A summary of the findings are presented in

Table 5.36 below.

Table 5.36: A summary of interview findings on potential future implementations

1. The concept of clutter on Moodle and its avoidance by learners needs to be addressed in light of pedagogic issues.	(Table 5.31)
2. Learners need further motivation to engage with discussion forums.	(Table 5.29)
4. The peer review process needs to be formalised as learners require more specific instruction on achieving this learning task. This is a module element which requires more specific definition and more explicit instruction for learners and must be aligned with existing levels of knowledge.	(Table 5.28)

5.7 Summary and Conclusions

This section has presented the findings from the end of module questionnaire and the semi-structured interviews. Questionnaire data was summarised and explored to evaluate the learners' perceptions of general elements of the module, their responses to the interventions, and their perceptions of how their experience may have been improved. The semi structured interviews were explored to evaluate the perception of learners on the general class experience and individual learner experiences. The data from both research tools suggest that while consideration should be given to the perception of clutter on Moodle, and difficulties emerged with the peer review process, learners' experiences were positive and implementations were successful.

The voices of five learners were explored in the first phase of this study. Themes, with the potential to improve the learning experience of e-learners, were abstracted from those

voices and further consolidated by four e-learners and four e-tutors in the second phase of the study. The themes were reconciled with the literature and resulted in a set of recommendations aimed at achieving the primary objective of this research ‘to improve the experience of e-learners’. The recommendations were implemented in a blended learning environment and learners’ voices were explored in order to determine if they were successful. The exploration of learners’ voices provides strong evidence that the provision of an active and salient leadership, the development of an active learning community, and the clear and precise communication of module elements did improve the experience of learners. Section 1.3 has argued that there is value in exploring the voices of individual learners. The significance of the findings of this research is that this argument has been tested and supported in a blended learning environment. Section 1.4 has argued that the literature provides a convincing rationale for attempting to improve learner experiences in a measured way. The findings also support this argument. The final section presents a summary of the finding with a view to exploring their significance further in light of the literature.

6 Discussion of Results and Recommendations

6.1 Introduction

This research was rationalised on the basis of a need to address a deficit in studies which explored learner experiences at a personal and deep level resulting in a lack of understanding of learner's feeling and emotions as they undertook e-learning (Section 1.2). The study set out to highlight the voice of individual learners rather than produce empirical generalisable knowledge. The objective of this research was to improve the experience of e-learners by developing a set of empirically based recommendations with the potential to improve the experience of learners, implementing these in a blended learning environment and evaluating the experience of learners to determine if the implementations improved their learning experiences. The evidence suggests that the objectives were achieved. This section presents a synthesis of the findings and the literature as presented in Chapter Two. However, prior to this, the limitations and the validity of the research as will be reviewed. This is important, not only to the significance of the findings to the research objective, but because this research has is an empirical reflection on my practice and has substantially informed it. The limitations of the research set help define the context of the validity of the study which in turn underpins the ensuing recommendations which will then be presented.

6.2 The Limitations of the Research

The target population in the first phase study were undergraduate learners whereas those involved in the final phase study were post-graduate. The expectations of Post-graduate learners may, for example, have differed substantially from those at undergraduate level. Littlejohn and Vojt (2010) cited several educational psychologists (Kirsch, 1999; Merton, 1968; Rosenthal & Jacobson, 1992) in asserting that expectations "exert powerful influences" on learner behaviour, regardless of the source of the expectations. This

suggested that the experience of final phase study learners could only be explored in light of their own prior expectations and comparisons with the first phase study findings would be of limited use. However, the primary use of the first phase study was to identify factors with the potential to impact positively or negatively on learners' experiences. Factors identified were consolidated by the second phase study and a review of the literature. No direct comparisons were drawn between first phase study learners and final phase study learners.

The research environments also differed substantially across this study. Firstly, the first phase study was conducted in a fully online environment, where for example, the learner could not be afforded the opportunity to present their work face to face to a body of tutors and receive immediate feedback as was the case in the final phase study which was undertaken in a blended learning environment. Secondly, there were several e-tutors involved in delivering the first phase study modules, all of whom spoke English as a foreign language. This may have impacted negatively on the effectiveness of communications and consequently the experience of learners whose first language was English. Thirdly, there were several constituent modules in the first phase study whereas the final phase study involved one module only. The differences across both research environments remove the possibility of validly comparing the experience of learners across the two studies. These limitations were addressed by presenting the results in absolute terms i.e. the first phase study gives evidence to how negative e-learner experiences can be. The second phase study and the literature provided recommendations for actions aimed at ensuring learners were not exposed to such negative experiences. The final phase study evaluated the impact of such actions on the experiences of learners, expected to described such experiences in terms of their' prior expectations enabling conclusions to be drawn regarding the effectiveness of the implementations. Comparisons could not be drawn or

the results could not be extrapolated to the broader e-learning community. The broader value of the research may be in the theories it can generate for testing across more general and specific e-learning environments. It also has the potential to impact on professional practice and accentuate levels of self-professional evaluation and reflexivity.

6.3 The Validity of the Research

Section 4.4.2 has argued that reliability in qualitative research relates to the quality i.e. how well the research explains phenomena and generates understanding i.e. the term 'validity' in qualitative research relates to concepts of quality such as rigour, suggesting an exploration of concepts such as subjectivity, reflexivity and the nature of social interaction while interviewing for example. The validity of this research is therefore based on two assumptions Firstly, the subjective nature of this research has exercised through a partnership process and reflective dialogue with learners', and although through interpretative abstraction, their voices have been highlighted. The assumption is that this process took me some way towards empathising with learner experiences. The assumption is made all the more reasonable in light of the rigour of analysis (section 4.16.2) which was helped me to apply a degree of objectivity in highlighting the elements of the interview discourses which were significant in terms of both highlighting learner voices and addressing the research objective of improving their learning experiences. Secondly, a further assumption is that the depth and breadth of this research defined by 11 in-depth exploratory interviews and 16 completed questionnaires justifies the claim that I have gained a deep and broad understanding of the experiences of learners who undertook the final phase module.

The validity of this research is attested to when audited against the five elements Heikkinen et al. (2007) argue are indicative of the quality of action research. In Section

4.8 I argued that I had a deep understanding of the, the background and the norms of the ‘social problem’ I was dealing with and thereby satisfied the principle of *historic continuity*. I argued that the *principle of reflexivity* was exercised through deliberate and purposeful reflection. The *principle of dialectic* was satisfied by rigorous attention and reflective and purposeful listening to the voices of learners in order to harvest rich and meaningful dialogue as a generative mechanism for knowledge. The central role of learners as partners in the research was evident as their voices were instrumental in defining the nature of the required interventions. The authenticity as the protagonist was important and driven by my professional integrity and the quest for truth which was constructed and acted out in an interactive partnership fuelled by honest and meaningful dialogue. The following sections is aimed at a further review and abstraction of the evidence forthcoming from that dialogue and pertinent to the question posed by the research objective: did the interventions improve the experiences of learners?

6.4 Discussion on the Research Results

Five e-learners who each engaged in an exploratory interview identified three elements of module delivery which caused demotivation and disillusionment:

1. Lack of active, knowledgeable and responsive leadership.
2. Lack of evidence of an active learning community.
3. Poor communications of module elements such as a module overview, clear and precise learning objectives, instruction on learning tasks and failure to provide a clear and fair assessment scheme.

The four e-learners and four e-tutors, who participated in the second phase study, also articulated the importance of these three issues. This resulted in the development of

implementations aimed at improving e-learner experiences by attempting to ensure an active and salient leadership, an active learning community and clear and precise communication of module elements such as the learning objectives and instructions on achieving the learning tasks. Subsequent to implementing the recommendations in the third study phase, the experiences of learners were evaluated using data gathered from 16 structured questionnaires and 11 semi-structured interviews. This chapter reviews the findings and discusses their significance in light of the literature. This section proceeds as follows. Firstly the overall experiences of e-learners are discussed based on the general perception of learners as to the nature of the module and the quality of the class experience. Subsequent to this, a discussion is provided on the impact of each implementation strand: active and salient leadership, an active learning community and communications of module elements.

6.4.1 The Overall Class Experience

This section draws on summarised evidence from the questionnaires and interviews (Table 5.3 and Table 5.20 respectively) as a basis for the discussion on the general experience of learners. The questionnaire which offered a greater breath of exploration is the primary instrument for this element of the discussion. However, the interview data offers more depth of understanding for any claims relating to the general class experience. Table 6.1 below presents an amalgamation of the findings from the questionnaire and interviews.

Table 6.1: The overall class experience

Questionnaire Findings (Table 5.3)
1. Learners indicated that their learning experience lived up to or surpassed expectations.
2. ‘Ease of access to resources’ and ‘time independence’s were identified by

learners as the most important advantages of blended learning delivery over the traditional mode of delivery.

3. Almost all respondents found it easy to access class notes on Moodle.
4. One third of all learners found Moodle cluttered.

Interview Findings (Table 5.20)

1. All learners indicated an overall positive learning experience.
2. Learners did experience de-motivation because of clutter on Moodle. Two learners in particular found the amount of information on Moodle daunting. However, overall learners found Moodle clear and useful.
3. The approach of learners to learning may influence their perception of what constitutes clutter in an e-learning environment.

The evidence from the questionnaire suggests that learners had mixed expectations about how positive they expected their learning experience to be at the outset of the module. However, learning experiences were positive and expectations were exceeded. The interview data gives evidence to this as individual learners described their experience as “impressive” - (Fred), “*highly positive and innovative*” - (Brian), and “*useful, really really useful*” – (Hesham). This may in part be attributed to the time independence blended mode delivery offered to the learners combined with ease of access to learning materials. While Sharpe and Benfield (2006) argue that there is a diversity of reasons for learner withdrawal from modules, Allan, (2004) highlights time management issues, and Attack & Rankin, (2002) identify connectivity problems with course content. Time management and study organisation are important to learners who apply a strategic or achieving approach to learning (Entwistle, 1991). These concepts are not independent entities as time is managed to facilitate engagement with learning resources, therefore difficulty in accessing learning resources can thwart time management and result in frustration and demotivation.

The questionnaire data, supported by interview data suggests that some learners did have negative learning experiences due to clutter on Moodle. This, an element of ‘design of the online environment’ that emerged in the first study phase of the research as a communications issue relating to quality of the online environment in communicating learning materials and learning tasks to learners . The ensuing recommendation was to provide ease of access, ease of navigation, avoidance of clutter and clarity and simplicity in the online environment. This was not consolidated in the test phase of the study and was not considered when developing the implementations. However, while access to learning materials and navigation did not emerge as an issue in the final phase of the study, one third of questionnaire respondents identified clutter as an issue. This suggests that perceived clutter did not impact on navigation. The interview data provided more clarity in suggesting that the issue was linked to learner motivation as some learners experienced demotivation (James; Coleen; Catherine; Maeve). It is worth noting however that the class was divided and for some clutter was not an issue (Hesham; Olive; Fred; Aishling). This is evidence of the diversity of learner experiences which makes design of the online learning environment a daunting task because designing for learning should factor such differences and ensure they impact on pedagogical design (Sharpe & Benfield, 2005; Cook et al., 2006). One solution may be as Padraig suggests, to make content collapsible for learners. This issue is at least partially addressed in later versions of Moodle where a ‘collapsed topic course format’ can be adopted. This allows learners to switch the visibility of topics on or off and is suggested to reduce clutter in modules which have a large number of topics or have lots of content in each topic². The tutor could enhance this facility by, for example, colour coding topic headings according to whether they are past, current or future. This goes a little way towards making learning more effective and efficient by facilitating personalisation through learner control (Chatti et al., 2010, p.76). However, if

² http://docs.moodle.org/23/en/Collapsed_Topics_course_format

Aishling is correct in arguing that the perception of clutter is caused by lack of engagement then it may be worthwhile devising strategies to encourage deeper learning and a constructivist approach through exploration of online learning content. One such strategy may be, for example, to encourage exploration of content through the provision of quizzes and links to related online learning resources. What is important is to recognise that clutter in an online learning environment can be an issue and it must be addressed in such a way as not to impact negatively on learners who thrive on lots of visible content and seem more resilient to what other learners find daunting and demotivating.

Overall, the evidence suggests, that while learners can have diverse and contradictory experiences, that the research objectives were achieved. Learners did not perceive time management issues or connectivity problems with learning resources. Indeed, the expectations of final phase learners were exceeded and their learning experiences positive.

6.4.2 The Provision of Active Leadership

The first study phase of this research clearly identified the possibility that learners can suffer very negative learning experiences in particular while engaging with modules where leadership is lacking, social learning and interaction with other learners is scant and feedback on performance and the quality of their work of is inadequate. Active leadership refers to the pervasive and approachable presence of the tutor in fostering confidence and motivation in learners. This presence suggests an awareness of learner needs, an easily contactable, approachable, supportive and responsive tutor who communicates enthusiasm and high expectations to learners. It also provides feedback to learners to facilitate them in achieving their potential. I attempted to achieve active leadership through several implementations (Section 3.6.1) some aimed at ensuring that I was easily contactable and others which involved the provision of speedy feedback to learners, both on an individual and group basis. The following section discusses the evidence pertaining to learners'

perceptions of an approachable and pervasive tutor presence and the impact of implementations on this perception. A discussion of the impact of implementations aimed at improving feedback to learners follows this. As the objective of the following section is to discuss the impact of implementations on the experience of learners, the interview data is the source of primary analysis. However, the questionnaire data provides some supporting evidence by providing a fuller account of the class and a more representative view.

6.4.2.1 Active Leadership: An Approachable and Pervasive Tutor *Presence*

Table 6.2 below presents a summary of the findings on implementations aimed at providing an active and salient leadership.

Table 6.2: The discussion - Active and salient leadership

The Interview Findings (Table 5.26)

1. Learners perceived an active and approachable tutor presence.
2. The evidence suggests that personal feedback was good and speedy, immediate and pervasive and important to learners.
3. The evidence suggests that text messaging was useful in establishing tutor presence and enhancing communications. It may be useful for informing and prompting learners in a convenient and perceived personalised manner.
4. The evidence suggests that personal feedback was good and speedy, immediate and pervasive and important to learners.
5. The use of text messaging to provide feedback was useful, personalised and novel.
6. Audio feedback improved learner experiences perhaps because learners could listen repeatedly and take notes at the same time.
7. Learner presentation of their research proposal with immediate feedback improved their learning experience perhaps by improving their focus on their research question and convincing them of the importance of critical review.

The Questionnaire Findings (Table 5.4)

1. High levels of active and salient leadership were perceived by learners.

2. The disposition of the lecturer supported good interpersonal relationships with learners.
3. Interventions at providing timely feedback improved learner experiences
Audio feedback improved learner experience by aiding progression with the research proposal and by highlighting required changes in a step by step and clear manner.

As Table 6.2 suggests, all interviewees felt the perception that leadership was active and responsive. The questionnaire findings support the interview findings and suggest that a high level of active and salient leadership was perceived by learners and that the disposition of the lecturer supported good interpersonal relationships with learners. Learners spoke very positively when asked if they perceived an approachable and pervasive tutor presence. For example Brian in stating that it “was remarkable and very much appreciated” suggested that efforts to provide leadership were noted by learners. It is apparent from the voices of learners that this impacted positively on learning experiences as for example Aishling said:

“that’s across the board that the class have said that, we couldn’t ask for more help and I think that’s hugely important that as a student you are able to feel that the lecturer is approachable and that there is, you know, no issue that you have outstanding that you are afraid to address...”

Mobile texting was used both for general communication and the provision of feedback. As a general communication tool it was used, for example to remind learners of submission dates and upcoming lecture topics. It was also used to inform learners when a submission was received, whether or not the standard was acceptable, and that a detailed review would follow. Fred felt the use of mobile texting was convenient, immediate and novel. Michael felt text messaging was of great value to learners, personalised, and an easy communication mechanism. Catherine felt that texting was good because it was

personalised and in her words attractive. James suggested that the use of texting was unusual and a good way of “getting up to date and communicating what is going on”. Aishling and Maeve felt the use of text messages were very good. All comments relating to the use of mobile texting were positive.

Texting was primarily used to send messages to the group of learners, with individual texts interspersed, for example, to prompt a learner to engage with a discussion forum. Also individual learners often responded to group texts with queries or comments and this initiated a dialogue. What is interesting is that texting, even when used on a group basis, seems to have a personalisation effect. This may be linked to its immediacy and the social role fulfilled by mobile phones. Kim and Keller (2008) undertook a study which compared the motivational effect of personalised emails and non-personalised emails on a group of undergraduate learners and found significant evidence to suggest that personalised messages impacted more positively on motivation and learner confidence and resulted in higher grades. This would suggest that the impact of texting, because of its perceived personal nature has value beyond the communication it carries. The use of texting for providing assurance to learners that submissions were received, for example, may have reinforcing the connection with the tutor and the module and provided positive emotional stimulus and increased motivation to excel (Murray, 1964, p.1). It also afforded the learner an opportunity to respond immediately to texts, as they tended to do, and engage in synchronous dialogue, thus providing a synchronous and personalised attribute to an asynchronous tool. Chatti, Jarke and Splecht (2010, p.76) argued that use of e-learning communication technologies can fail because effective and efficient learning needs to be personalised and offer learners control. The use of texting may mitigate this problem. Also, texting, whether to the group of learners or to individual learners, seems to have provided a novel and personalised tutor presence and in doing so may overcome what

Ingleton (1999) called the limitations of some technologies to value the whole person and not just the intellect. For example, a text reminding a learner of an upcoming lecture and lecture topic not only gives an importance to the lecture but also to the presence of the individual learner. What is clear is that learners, when asked about the value of mobile texting, made reference to its nature (e.g. personalised and novel) rather than the value of the message or feedback. In this sense, texting was useful for establishing and reinforcing a tutor presence and prompting learners to undertake learning tasks. The impact was primarily motivational and perhaps this can be explained by the cause-effect relationship between emotion and experience when an external stimulus (e.g. receiving a text) arouses an emotion and changes occur in the person's subjective experience (Murray 1964, p.56). The suggestion is that the emotional response in this case is increased motivation due to increased personal closeness of the tutor. Also, as texting was not a standard e-learning tool, it may have had a novel value and attracted more attention from learners. It is clear that mobile texting impacted positively on the experience of learners by presenting and reinforcing a personalised tutor presence. However, it is currently unclear if the positive effect of texting will diminish as learners become accustomed to it.

6.4.2.2 Active leadership: The Provision of Feedback

This section discusses the impact of feedback on the experience of learners. Several mechanisms were used to provide feedback: one to one consultations, mobile texting, email, discussion forums and the comment tool in Microsoft Word in conjunction with audio feedback which was embedded in the respective document under review. In addition, learners formally presented their research proposals (using PowerPoint) to a group of 15 potential supervisors and received immediate feedback. The interview data suggested satisfaction with the overall levels and speed of feedback and indicated that this was very important to learners. Coleen described it as hugely important, Aishling as "brilliant" and

“motivating” because it allowed her to “see where she stood”. Catherine described prompt feedback as valuable while Michael said it was sufficiently adequate to monitor progress. Fred felt it was convenient and quick. The mechanisms used to provide feedback also provided a positive experience for learners. The questionnaire data provided supporting evidence in indicating that the class in general felt that the provision of feedback was adequate and timely.

Mobile Texting: Learners’ responses when asked about the use of mobile texting suggest that they perceived it as a personalised and novel communication tool rather than a feedback mechanism. This may be because it was deemed unsuitable for the provision of critical feedback and used in a far broader context. The voices of learners suggested that the primary impact of mobile texting was in fostering a personalised tutor presence, a concept which was discussed in the previous section.

Embedded Audio: All learners responded positively to the provision of audio feedback. Hesham found it useful. Olive found it very useful and suggested it made learners feel cared for. Maeve, who listened repeatedly found audio feedback very useful and saw a novel value in it. She listened to the audio file several times, suggesting a permanence of record value greater than that afforded by a face to face discussion. This suggests that there may be value in recording face to face feedback sessions with learners. Aishling also found audio feedback hugely beneficial because of its repeatability. Caitlin felt audio feedback was “brilliant”, “very clear” and a “good idea”. Coleen suggested that one of the values of audio feedback was that it could be listened to at any time, and Fred felt it made learning easier. It may have been of increased value to Fred who, as a non-native speaker could listen to it repeatedly. Caitlin felt audio feedback was “good”, “worked perfectly” and “beneficial to learners” because they could listen while reviewing their proposal. James, who listened repeatedly found audio feedback “good” and “important to act upon”.

Audio feedback improved the learners' experience and like texting, it had a novel value, and had the potential to make learners feel cared for. Thus it reinforced tutor presence in an innovative way. However, its use was more specific (to provide critical feedback) and it supported learners in achieving the learning task of developing a research proposal. There is no evidence to suggest that audio feedback resulted in better research proposals, but it did make the task of engaging with and implementing tutor recommendations easier. The provision of audio feedback perhaps supports a constructivist approach as it is task oriented and facilitates design and discovery through more active engagement with the learning environment (Conole et al., 2004) i.e. it engaged learners with their research proposal through their visual and aural senses. It also reflects the process element of Legitimate Peripheral Participation by engaging the learner with a practitioner and moving them towards greater expertise (Wenger 1991, p.35).

Oral presentation of research proposals: Each learner presented their research proposal to a body of 15 potential research supervisors and received immediate feedback. All learners saw this as a positive and useful experience. Hesham felt the feedback was good and helped him with his research proposal. Coleen felt the session changed her approach to learning as afterwards she reviewed her own work and sought critical feedback from others. Michael felt the pre-presentation apprehension felt by learners was motivational and the feedback helped him narrow down his topic. Caitlin felt that learners benefitted from feedback given to other learners. In this sense, individual feedback became a general feedback and the interaction among learners and lecturers constituted an active learning community as was evident on the day when learners were observed in groups discussing their presentations and outcomes. The oral presentations of research proposals by learners to a body of potential supervisors improved learners' experiences. It supported learners in finding focus and encouraged critical reflection of their own work. It engaged learners with

a community of practitioners who provided immediate critical comment. All learners were present for all presentations and feedback sessions, where the diversity and at times contradictory nature of comments from lecturers exposed them to this feature of the community of practice which promoted reflection, engagement, debate and readjustment of their world view. In this sense it promoted social constructivism, which according to Mergal (1998) is based on social negotiation, where reality is shared and meaning is negotiated, and according to Dyke et al. (2004) involves reflection, experience and engagement with others. What is interesting is that this feedback mechanism, which was successful in providing valuable feedback to learners, seems to have added value to that feedback by way of its social nature. This emphasizes the social aspect of learning with reference to communities of practice where Wenger (2006) emphasized the value of discussion, reflection on problems, and approaches to solving them, all elements of an active learning community.

The evidence suggests that learners perceived an active and approachable tutor presence. The provision of feedback achieved through text messaging, audio feedback and the presentation of research proposals was deemed by learners to be speedy, useful personalised and novel. Learners' voices suggest the objective of improving their learning experience by providing active and salient leadership were successful.

6.4.3 An Active learning Community

Learners involved in the pilot phase of this study were demotivated and felt isolated because of the total absence of evidence of an active learning community. The third study phase of this research involved two implementations aimed at promoting learners interaction in a social constructivist environment. Firstly, learners were required to post their research proposals to an online discussion forum and have them reviewed by two of

their peers. In addition, each learner was required to review two research proposals.

Secondly, a number of statistical problems were posted online and learners were required to post their solutions and discuss methods with other learners. Table 6.3 below presents a summary of the findings on efforts to involve learners in an active learning community.

Table 6.3: An Active Learning Community - The Discussion

The Interview Findings (Table 5.30)

1. Learners felt part of an active learning community and this improved their learning outcomes.
2. Learners felt that engagement with discussion forums improved learning outcomes. However learners wanted to see explicit and tangible benefits to encourage participation.
3. The peer review process needs to be formalised as learners require more specific instruction on achieving this learning task. This is a module element which requires more specific definition and more explicit instruction for learners.

The Questionnaire Findings (Table 5.11)

1. The perception of the class in general was that the tutor fostered an active learning community.
2. Most learners felt part of an active learning community. However efforts of the tutor to foster an active learning community could be improved upon.
3. Learners felt that collaboration among learners improved learning outcomes

The interview findings, supported by the questionnaire findings, suggested that learners engaged with an active learning community and they felt that this improved their learning experience. Learners articulated the benefits of group work (Table 5.27). Catherine found them extremely useful as she felt everybody was willing to help each other, suggesting a sharing of learning and increased efficiency in the learning environment. Maeve referred to the different opinions in the class and the need to sort out “what you think” suggesting a

catalyst for reflection and negotiation of meaning. Coleen found group work hugely important and commented on how simple she felt learning tasks became when worked on in a group. She further commented on how she mastered the module, a module which she would have avoided if possible, but now would undertake. Coleen was undoubtedly hugely motivated by group activities and enjoyed a sense of achievement on mastering the module. Aishling attributed group activity to her journey from disliking the module to it “probably” becoming her favourite. The experiences of learners are consistent with Ciocco et al. (2005) who argue that collaborative networks, such as discussion forums, provide learners with a sense of belonging to a learning community where they achieve higher thought levels and better information retention than learners who work on their own. Higher thought levels and better information retention facilitate deeper reflection, improved experiential learning and more meaningful engagement with others. These are factors identified by Dyke et al. (2004) as the central tenets of learning. An active learning community also helps inform the social negotiation of meaning in a shared reality and is therefore the basis for social constructivism (Mergel, 1998). However learners’ comments also highlighted the central role of emotion as the experiential connection with an environment. In the case of this study for example, frustration was substantially avoided through peer assisted learning and a sense of belonging was evident. There was also movement from dislike to like by at least two learners, a pre-requisite for transition from surface to deep learning. Learners’ comments also highlighted the importance of factoring positive emotion into any social constructivist environment as the expression of emotion, or empathy, can propagate across a social group (Glazer, 2008).

The value of developing an active learning community as articulated by the learners emphasises the importance of considering any critical comments learners provide on its implementation. With reference to the use of discussion forums for example, Fred argued that something had to be sacrificed in order to engage with discussion forums and Caitlin

referred to how busy learners were with deadlines. Hesham suggested the allocation of a small number of marks for participation in discussion forums as an incentive for learners. Another approach however may be to convince learners of the value of engaging with discussion forums and the expectation that they do so. This issue is complex for several reasons. Firstly, discussion forums have a variety of uses which do not lend themselves to assessment, for example communicating elements of leadership identified by Anderson (2003) such as sharing learning materials and establishing intellectual standards and expectations. Secondly, the use of discussion forums is not easily assessed quantitatively or qualitatively. Caitlin highlighted the fact that the peer review process may have been meaningless as learners were not sufficiently knowledgeable to review the research proposals of their peers. She highlighted a serious flaw in a mechanism which may have promoted activity and interaction and promoted a sense of community while providing little academic benefit. These factors suggest that any future implementation of discussion forums, and in particular the peer review process, should be based on empirical evidence gleaned from a review of the literature.

The objective of improving the experience of learners by establishing an active learning community were achieved. Learners perceived such a community and suggested that this improved their learning experiences.

6.4.4 Communications of Module Elements

The communication of module elements involved four interventions: communications of a module overview, communications of clear and precise learning objectives, communication of instructions on achieving learning tasks and the communication of a clear and fair assessment scheme. Table 6.4 below presents a summary of the finding.

Table 6.4: Communications of Module Overview - The Discussion

The Interview Findings

1. A module overview is important to learners at the outset to prepare learners for what the module involves and what is expected of them. (Table 29)
2. Learner highlighted the importance of Moodle in preparing them by communicating the module overview at the outset of the module and continually throughout its progression. (Table 5.31).
3. While the face to face induction session was indeed useful, it does seem that the supporting materials on Moodle were very useful to learners in providing more detail on module content. (Table 5.31).
4. Learning experiences were enhanced through the emphasis placed on communicating clear and precise learning objectives. (Table 5.31).
5. The use of podcasts improved learner experience by providing instructions on achieving learning tasks and providing a learning mechanism which supported learners in mastering module elements. (Table 5.33).
6. The provision of a clear and a fair assessment scheme improved the experience of learners by allowing them to focus on elements of the module they felt had the potential to yield higher grades, and by implicitly providing instruction on achieving learning tasks. (Table 5.34)

The Questionnaire Findings (Table 5.15)

1. The perception of the class in general was that module elements were communicated well.
2. The evidence suggests that further consideration should be given to communicating a module overview and ensuring learners can monitor their progress through the module.
3. The learners felt that learning objectives, instructions on achieving learning tasks and a fair assessment scheme were communicated well.
4. The use of podcasts improved the experience of learners.

As Table 6.4 indicates the interventions were successful in improving the experience of learners. This is evidenced by the interview data and supported by the questionnaire data. The following section discusses the impact on learners' experiences.

6.4.4.1 Communications of a Module Overview – The Discussion

A two hour module overview was delivered to learners in an induction session. This was augmented with a module syllabus and information on the various module topics on Moodle. As Table 6.4 suggests, efforts to provide learners with a module overview and the challenge they faced were successful. Learners highlighted the importance of this. Coleen felt that she had received “a very good overview”. James “saw what it entailed” and Maeve said “we knew exactly what we were getting into”. Aishling suggested the value of the information that was provided to learners in stating “we knew what to focus on”. Fred felt likewise and said that it “helped them to prepare for the module” and Michael stated that the value was realised when they went home and “took on the issues”, suggesting that he absorbed the module content online. Hesham perhaps summed up the value of the provision of a clear module overview when he said that it was “empowering”. While it seems that the induction session was extremely useful to learners, there was perhaps synergy between this and Moodle because the online learning environment allowed learners engage with more detailed information on upcoming topics. Michael, in stating that the information on Moodle was “actually better and more useful” than that provided at the induction session, suggests that this is where focus was realised, preparation could begin and learners began to engage with module content. Included in the detail on Moodle was the provision of clear and precise learning objectives. The primary value of the induction session was in preparing learners for a cognitive journey from novice to expert, in communicating high academic expectations and engagement at a deep rather than a surface level. It connected learners with the tutor and the module in an emotional positive

way, and therefore became a motivational mechanism. The information on Moodle was perhaps more of a detailed module map providing access to important information such as learning objectives. It also provided support in achieving the learning objectives, by for example, the provision of podcasts. In this sense, information on Moodle also became an achieving mechanism.

6.4.4.2 The Provision of Clear and Precise Learning Objectives:

The learning objectives were presented textually in Moodle with the introduction to each topic. Learners were directed towards them in face to face sessions, by email and by group texts which were sent subsequent to commencement of the respective topics. The evidence suggests that the experience of learners was enhanced through this implementation. Brian said that the provision of learning objectives helped him make an exam selection, suggesting that it enabled him to become a strategic learner and focus on a set of learning objectives which maximised the return on his effort. For Catherine it meant not being thrown in at the deep end as the learning objectives were presented incrementally, one building on the other. This is important as it promotes a deep learning strategy by facilitating the process of becoming an expert, a process which Marton and Saljo (1976) suggested involves learners building upon previous knowledge. Lave and Wenger (1991, p.35) identified this as the process element of Legitimate Peripheral Participation, where learners progress from newcomers to full participation by developing expertise. The notion of developing expertise is also embedded in constructivism (JISC, 2001, p.16) which involves developing high levels of declarative and procedural knowledge (Dror, 2011; Williamson, 2004). The provision of clear and precise learning objectives and the provision of clear instructions on achieving learning tasks are complimentary in helping learners construct declarative and procedural knowledge i.e. knowing what and knowing how.

6.4.4.3 Communication of Instructions on Achieving Learning Tasks

The primary learning tasks facing learners were the development of a research proposal and the development of skills in various statistical techniques. Learners were provided with a comprehensive guide for developing their research proposal. This included access to a specially prepared document called 'Undertaking your Research Proposal' and a second document with suggested headings, a brief outline of the purpose and content of each section, and the marks available for each section. Instructions for achieving the learning tasks in statistics involved in-class demonstrations and a number of podcasts for each statistical test. This was considered as the primary intervention.

What became very clear during the third study phase interviews was that learners did not interpret the interventions aimed at providing instructions to learners on developing their research proposals with the provision of 'instructions on achieving learning tasks'.

However, they did commend this effort for its value in providing a clear and fair assessment scheme which is the subject of the next and final section. Learners associated 'instructions on achieving learning tasks' primarily with podcasts provided on Moodle.

The use of podcasts had a positive effect on the experience of learners. Caitlin found podcasts "fantastic" and felt they definitely improved her results. Aishling found them short and to the point. Hesham found podcasts really useful. Olive felt they changed "the way of learning" completely for her. Fred found them very useful, in particular because of the language barrier he experienced as a non-native speaker. Michael felt he learnt better because he practiced statistical techniques as he watched podcasts on them. The major weakness in the podcasts was that they were primarily aimed at supporting learners in achieving procedural knowledge i.e. in learning how to conduct statistical tests with little focus on declarative knowledge i.e. knowing what tests to conduct under specific circumstances. However, in a blended learning environment, balance was achieved as face

to face sessions could focus more on declarative knowledge, such as the strengths, weaknesses and appropriate application of the various statistical techniques. An example of this was when learners used podcasts to learn the process of applying Bayes Theorem while the underlying concept of prior probability, based on real life applications, was discussed in class. This encouraged reflection, engagement, discussion and contextualising learning by coupling knowledge with contextual flexibility rather than rule rigidity. Tynjälä & Hakkinen (2005, p.7) highlighted the importance of the integration of conceptual knowledge and practical knowledge and of knowing how this integration occurs in order to offer better pedagogical support.

6.4.4.4 The communication of a clear and fair assessment scheme

The assessment scheme for the module comprised 50% for statistics and 50% for a research proposal. Statistics were assessed by a standard written exam and prepared model solutions, both of which were reviewed by an external examiner for clarity and fairness. The implementation of a fair assessment scheme was aimed at communicating a clear and fair assessment scheme for the research proposal. This involved marking each section such as the research objectives and the literature review out of 100 and applying weightings to the appropriate sections (see Appendix I). Learners were presented with the grading scheme and subsequent to grading were provided with a breakdown of where they achieved their marks. As Table 5.34 reports, this implementation improved the experience of learners by allowing them to focus on rewarding elements of the module and by providing them with instructions on achieving learning tasks. All interviewees commented on the clarity, and almost all on the fairness, of this scheme. Hesham said it made him feel “fine”. Maeve felt that everybody knew what they should focus on. Catherine differentiated it from other modules where she felt learners were unclear about the marking

scheme. James used the marking scheme to decide what to “put most work into”. It allowed Michael to focus more on topics he deemed important.

What is clear from the findings is that the provision of a clear and fair assessment scheme is a learner focussed strategy. It is reasonable to assume that it had a motivational impact by assuring learners that achievement would be fairly rewarded. It empowered learners to develop a strategy, which for example, in the case of the research proposal assisted them in aligning effort with reward. In this case the assessment scheme communicated academic expectations by explicitly assigning relative values to different learning outcomes and facilitated a more considered engagement where learners could focus more on what was most significant. While this encourages strategic learning, it is important to note that the strategic learner can take a surface or deep approach. Entwistle (1991) suggested that the learner’s approach, whether surface or deep, tends to be consistent over time. He also argues that module design such as the nature of assessment procedures can influence this. Biggs (2012) also argued that learner-focused strategies have the potential to change the learner’s approach to learning by changing their conceptual understanding of learning and their world view. However, it is unclear how the impact of the provision of a clear and fair assessment scheme impacted on extrinsic and intrinsic motivation. What is clear is that the impact was positive and encouraging for both surface and deep learners.

6.5 The Findings and the Research Objectives

Overall, the objective of improving the experience of learners through providing clear and precise communications on module elements was successful. The voices of learners suggest that they perceived an active and salient leadership which was responsive and supportive. The use of mobile texting seems to have created a personal connection with

learners. The presentation of research proposals to potential supervisors provided strong motivation to learners, in addition to fostering a social constructivist learning environment. Audio feedback supported learners in engaging with critical feedback in a more effective and efficient manner.

Efforts to develop an active learning community provided both substantial motivation and mutual support systems for learners. While several comments highlighted an emotional connection, the most striking impact was in the absence of feelings of isolation and frustration which can result from difficulties in achieving learning tasks. This element of the research highlighted the fundamental role of social constructivism by promoting engagement with others, reflection, reasoning and the negotiation of common meaning in achieving deep and meaningful learning.

The communications of module elements also improved learners' experience. The provision of a module overview with Moodle support seemed to set in place complimentary mechanisms in a motivational mechanism and an achieving mechanism. This process was mirrored at a more detailed level with the provision of clear and precise learning objectives and instructions on achieving learning tasks. The research suggests that the specification of learning objectives constituted a motivational mechanism in communicating steps from novice to expert in incremental manner. On the other hand, instructions on achieving learning tasks provided a complimentary achieving mechanism, in particular for procedural knowledge. The provision of a clear and fair assessment scheme motivated both surface and deep learners and facilitated them in taking a strategic learning approach.

6.6 Summary

This chapter has outlined the limitations of the research and thereby the terms of reference for the validity of the study. It has presented the combined results from analysis of the questionnaire and the interview data and synthesised those results with reference to the literature review presented in Chapter Two. The results suggest that three strands of implementations aimed at achieving active and salient leadership, developing a community of learners and providing clear and precise communications of module elements were successful. The next chapter will discuss the conclusions which can be drawn from and the recommendations ensuing from this body of research.

7 Conclusions and Recommendations

This Chapter presents a discussion on the overall conclusions drawn in light of the three phases of the study and the unique contribution to educational research resulting from the success of the implementations. As this research was aimed at informing practice, the implications for educational practice are then discussed. Innovation and change in educational practice requires strategic support from HE authorities. Therefore the implications of the research to educational policy will be discussed. Finally, issues for further research are identified and briefly discussed.

7.1 Conclusions

This study commenced with an evaluation of the experiences of five e-learners who participated in the first study phase of the research. The primary theme which emerged from this evaluation was poor communication. This manifested itself in many ways, poor communications with the tutor, unclear learning objectives and learning outcomes, and little or no feedback on performance. The effect of this on the five e-learners was diverse, a sense of isolation, a lack of belongingness, a loss of motivation, difficulty in measuring own performance and uncertainty of one's own strengths and weaknesses in the discipline area. According to Cheol (2003), poor communications is a strong indication that there is a deficit in leadership and guidance. Stodel et al. (2006) argued that intellectual and scholarly leadership is not sufficient as learners also need access to the tutor's expertise. This raised the question for me; does successful e-learning delivery require robust leadership and high salience of interpersonal relationships? This research suggests that it does. I also felt that perhaps if Anderson's (2003) notion of leadership, which involves sharing subject matter, setting and communicating the intellectual climate of the course and modelling the qualities of a scholar, was coupled with an effort to develop an interpersonal relationship with learners, it would appease the appetite (apparent in the first

study phase interviews) of learners for a sense of participation in a broader academic community. The first study phase of the research identified three other elements of communications as important to learners but lacking in the modules they undertook: communications of clear learning objectives, communication of clear instructions on task, and communication of feedback to learners. This resulted in learners having a very negative learning experience.

The second study phase of the research consolidated the importance of elements of module design, which had such a negative effect on the experience of learners who participated in the first study phase. In particular, the deficit in communication which suggests a disconnection between tutors and learners, scant use of any pedagogical design and the total non-application of constructivism to the learning environment. The findings of the first study phase and the second study phase were consolidated in the literature. These findings illustrated the importance of factoring motivation and emotion in to the learning environment, a concept summed up by Gardner (1999, p.77) who stated:

“...any portrait of human nature that ignores motivation and emotion proves of limited use in facilitating human learning and pedagogy.”

Achieving motivation strongly aligns with Anderson's (2003) notion of leadership and involves encouraging learners to make a deep and meaningful connection with the learning environment. If Gardner (1999), and Russell and Barrett (2009), are correct then the learners connection with the learning environment is achieved at an emotional level and this must be factored into any learning environment, posing a challenge to e-learning and blended learning environments. That challenge, considered in light of my firm belief that optimal learning requires a social constructivist environment, was addressed in this study through three implementations. These were achieving an active and salient leadership, developing an active learning community and communicating module elements clearly and

precisely to learners. The implementations were largely successful. The only negative experiences resulted from perceived clutter on Moodle by some learners. The level of success was undoubtedly enhanced by the development of warm interpersonal relationships with learners. I am convinced that the online tutor presence was important in achieving this through the personalisation of communications such as email, text and audio feedback. In this sense the technology was indeed secondary to how the technology was used. This is because of the importance of ensuring a positive emotional connection with learners, important because cognition and emotion are inseparable. This highlights the value of supporting learners in a friendly, supportive and gracious manner. How well this was achieved was not measured, however, what is clear from the voices of learners is that they made a positive emotional contact with the module and this was a substantial factor in achieving successful interventions.

7.2 The Unique Contribution of the Study to Educational Research

The unique contribution of this study to educational research is based on the identification of the unique combination of three factors; *active and salient leadership*, *an active learning community* and *clear and precise communications of module elements* as important in an e-learning environment. The implementations based on these three factors were evaluated and deemed successful in a unique blended learning environment.

However, the implementations had an empirical genesis in the phase one study, also a unique learning environment, they were consolidated by a number of e-learners and e-tutors in the phase two study, and were reconciled with the literature. Thus while the implementations proved successful in a specific context, they were supported as important factors in an e-learning environment across a broader context. With reference to educational research, this study has provided an empirically based rationale for evaluating the importance of providing *active and salient leadership*, *an active learning community*

and *clear and precise communications of module elements* across various learning environments. However, all such evaluations should factor in human emotion in as the learner's connection with any learning environment can only be meaningfully understood and described in emotive terms.

7.3 Implications for Educational Practice and Policy

The voices of learners established tangible benefits and created for me a cohesive bond between the theory and practice of tutoring and thereby informed my practice substantially. They convinced me of the value of pursuing critical comments from learners as they may identify means of enriching the learning environment. The primary recommendation for practitioners is to engage with learners with a view to exploring their learning experiences at a deep and idiographic level and with the purpose of improving those experiences and developing an enhanced practice. Exploring experiences at a general or class level is of limited use because of the diversity and at times contradictory nature of learners' experiences. Exploring experiences at an individual level is important to valuing the whole person and not just the intellect. Cognition and emotion are intertwined and inseparable making it impossible to address cognitive issues without considering the affective. Tutors have substantial power to positively influence the learning environment they practice in and which is unique to them and the learners they have responsibility for. This study strongly suggests that the voices of learners provide an expedient and informative mechanism for directing that substantial power.

In Ireland, educational policy is increasing pressure on teaching institutes to provide increases in efficiencies and productivity. Productivity is generally measured by the quantity of weekly teaching hours and average class sizes. This is concurrent with an increasing uptake of e-learning and e-learning technologies. These developments are

proceeding far faster than an understanding is developing of their impact on those most affected and least consulted, i.e. learners. Very little effort is being applied to understanding the impact on learners of a greater reliance on IT. Policy makers need to be aware of the impact of e-learning technologies on learning experiences.

This is to facilitate the development of an e-learning strategy, which Engelbrecht (2003) argued, should address the concerns of e-learners. Traditionally the focus has been on technological issues, however, this research suggests that how technology is used, or the nature of its pedagogic application, has more potential to impact on learners experiences than technology per se. Technology should be used to connect with learners at a deep and meaningful level to engage, motivate and support. This is because learning has cognitive and emotive elements and thus, ignoring emotive elements results in not addressing the set of learning issues in its entirety. It is also vital for policy makers to provide the resources for tutors to explore their practices and develop a better understanding of learners' experiences. There are two important elements to this. Firstly to encouraging and facilitate continual evaluation by tutors of the impact of their practices on learners. Secondly, tutors require to understand better how learners interact with technology and the impact of learning technologies on their learning experiences. A better understanding will help insure that increases in the measurable levels of efficiencies will be shadowed by more difficult to measure improvements in effectiveness and that the experience of learners impact at a strategic planning level, and place issues of quality in education in a more prominent role.

7.4 Issues for Further Research

This study has established learning as occupying a cognitive-affective domain. The question also arises, how communication technology can be used to value the whole person and not just intellect, the affective and the cognitive. This research has demonstrated, for

example, that the use of texting to provide feedback to learners and to inform them of upcoming lectures was appreciated by learners and improved their learning experiences. Is this effect the result of novelty value which can diminish over time? The implementations in this study, aimed at *developing an active and salient leadership, an active learning community* and *clear communications of module elements*, were effective in the unique context of this study. More research is required to determine if these results could be extrapolated to other contexts or can the set of specific actions be redesigned for effectiveness in other learning environments. Learners found the provision of audio feedback, embedded in the reviewed document, was of value to them. Research, aimed at determining the value of this provision would be useful, for example, if and how it enhances cognition and if and how it enhances the connection with the tutor.

8 Personal Reflections

In 2006 I observed five learners disillusioned, frustrated, feeling isolated and void of motivation while they undertook modules I had no control over. I am now tutoring a group of learners from Saudi Arabia in a learning community characterised by warm interpersonal relationships, high levels of motivation, and engagement in a caring and sharing environment. This perhaps sums up the significance of my professional journey. This is however only part of the story. I love exercising my profession. If I could have designed an activity to bring fulfilment to me I would be practicing my skills as I am now. What a reward for the journey I undertook. The journey through this research, characterised by a process riddled with self-afflicted hardship has brought joy and enlightenment. I made many mistakes while undertaking this study. I continually underestimated the level of engagement required and was continually thwarted by my interest and innate need to broaden rather than deepen my knowledge. I could never refuse an enlightening read on philosophy, anthropology, astrology, archaeology, sociology, natural history or quantum physics and could never turn down the opportunity to undertake a piece of woodwork or strip the freezer to fix a fault in it. I seemed to resent learning more and more about less and less and seemed to have a need to find new horizons rather than peering deeper beyond those in my sight. I also loved the distraction of familiar voices drawing me from my office and offering social rather than academic engagement. In addition to my personal disposition, deep emotive family difficulties blighted my first few years of study. The loss of a brother, confidant and great friend shattered my reality, transformed aspirations into vanity and left me with a lingering sense of doom. However, his loss prompted a process which prolonged my life and his belief and pride in me gendered positive emotion and bolstered my intrinsic motivation to complete the study.

My journey has been from builder to explorer. I came from an engineering mind-set where the most useful and only real knowledge is objective, discoverable and has a common meaning to all observers. While facts and measurements have a use in quantifying certain properties of various realities they are very limited for exploring the multi-dimensional realities of real life social contexts. 'Listening' to narrative awoke me to its subjective power and richness, not only in a scientific context, but in our daily realities as it enriches us and those we engage with. Cognition and emotion are like the fabric of space-time – one entity and unfathomable as the richness of narrative which leaves but an impression or shadow of the many underlying realities.

This research also brought joy and enlightenment. It has been a place of awakening, learning and discovery, understanding the role of emotion combined with the exercise of 'hearing' the learners' voice has had a profound impact on my practice. My relationship with learners is now more emotive whether in the classroom, face to face, on a one to one basis or online. My connection with learners has always had an emotional characteristic, but an absence of any understanding of the role of emotion in cognition and learning hindered me in taking advantage of this characteristic. For example, being unaware that learners may commence a module with negative emotions which adversely affects motivation and cognition can ensure the tutor applies sensitivity. In such cases for example, when the learner lacks confidence, the impact of positive communication from the tutor may be hugely beneficial. This concept is illustrated by the Proverb '*...and a word spoken in due season, how good is it!*' (Proverbs 15, 23). On the other hand, an untimely and personalised reprimand may not only consolidate the lack of confidence but cause anguish for days or weeks. Such is the power of communication which can only be denied by decoupling emotion from cognition. This also demonstrates the real challenge in

e-learning which is not addressed by what e-learning tools can do, but by what we do with them.

Intrinsic motivation can be nurtured by positive learning experiences or suppressed by negative ones. Not factoring emotion into the learning experience also makes it easy to assume that there is one generic learner experience and oversimplifies the complex task of designing for learning. I once took pride in being a lecturer, which on reflection suggests someone who formally passes knowledge to learners by speaking to them. I now realise that teaching and learning is extremely complex and I am much happier with the term tutor or one who facilitates learning. I have moved from being a knowledge distributor to a constructor of emotive-cognitive environments where deep learning is promoted through engagement, discussion, reasoning, questioning and reflecting.

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Appendices

Appendix A: Research Methodology and Statistics

Module Name: Research Methodology	
Module Code:	Level: 9
Module Duration (Weeks): 16	
Module Leader: Kevin Heffernan, Larry Elwood	
Module Home: School of Business	
Programme: Master of Business in Management	Award Module: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Programme:	Award Module: Yes <input type="checkbox"/> No <input type="checkbox"/>
Programme:	Award Module: Yes <input type="checkbox"/> No <input type="checkbox"/>
(a) ECTS Credits: 5	Weekly hours duration:
	<i>Lectures:</i> 2
	<i>Tutorials:</i> 4 (Online)
	<i>Labs:</i>
	<i>Other</i>
(b) Pre-Requisite Modules:	
Co-Requisite Modules:	
Equivalent Modules:	
Module Descriptor	
<p>Research Methodology: This module, which facilitates the learner in the preparation of the thesis component, will consider the principal data collection, management, measurement and analysis issues in both the quantitative and qualitative research paradigms.</p>	
(c) Intended Learning Outcomes	
<i>On successful completion of this module the learner should be able to:</i>	
1. Review the relevant literature and develop a conceptual framework for a research project based on topical and emerging issues.	
2. Conceptualise, contrast and criticise the application of the research process to solving business problems.	
3. Exercise defensible judgement of the appropriate application of qualitative and quantitative research methods.	

4. Demonstrate empathy of ethical issues and their impact on stakeholders in the research process.	
5. Factor issues of validity, reliability, and ethics into the formulation of a business research problem.	
6. Report on the current literature using an appropriate bibliographical and referencing style.	
Indicative Syllabus Content:	
<ul style="list-style-type: none"> • The nature and role of research/business research • Comparison and contrast of social science research with natural science research • Ontological and philosophical assumptions underlying research • The nature of quantitative and qualitative research • Combining qualitative and quantitative research • Commonly applied research methodologies • Determining and justifying a research methodology • The qualitative researchers tool kit: Phenomenology, Ethnography, Auto-ethnography • Husserl's "Bracketing" • Research Instruments and data collection • Issues of quality in research • Ethical issues in research • Designing the research • Processing and displaying data • Data organisation and analysis using Microsoft Excel • Writing the research report • Research methodology and practice evaluation • Graphical descriptions of data and numerical descriptive measures • Probability • Discrete and continuous random variables • Sampling Distributions • Estimation of the population mean • Linear regression • Analysis of variance • The Chi-Square test and analysis of contingency tables 	
(d) Assessment Methodology:	
The primary purpose of this module is to provide learners with the necessary research skills to commence, manage and complete a major dissertation. Attendance at this module will be monitored and permission to proceed to commence the dissertation will be determined by attendance. Upon completion of this module students should have generated a thesis proposal.	
(e) Pass Criteria:	
Compilation of Final Mark or Grade:	

50 % CA
50% Final Exam

Essential Reading / Resources:

Business Research Methods with CD , Boris Blumberg, Donald Cooper, Pamela Schindler (University of Maastricht, FLORIDA ATLANTIC UNIVERSITY)
Statistical Techniques in Business and Economics, 14th Ed., Douglas A. Lind, William G Marchal, Samuel A Wathen., McGraw-Hill Irwan, 2010.

Bryman, A & Bell, E. (2007), *Business Research Methods*. Oxford University Press, UK.

Collis, J. & Hussey, R. P. (2003), *Business Research: A Practical Guide for Undergraduate and Postgraduate Students (2nd Edition)*. , Macmillan, New York.

Recommended Reading / Resources:

Anderson, J. (2002), *Assignment & Thesis Writing, (4th Edition)*. John Wiley & Sons, Brisbane.

Bruce L. Bowerman, Emily S. Murphree, Richard T. O'Connell, (2008), *Business Statistics in Practice, (5th Edition)*. Irwin Professional Publishing, New York.

Guba, E. G. & Lincoln, Y. S., Editors; Denzin, N. K. & Lincoln, Y. S., (1998), *Competing Paradigms in Qualitative Research', The Landscape of Qualitative Research: Theories and Issues*. Sage Publications, London.

Gubrium, J. F & Holstein, J. A. (1997), *The New Language of Qualitative Methods*. Oxford University Press, New York.

Kumar, R. (2005), *Research Methodology: A Step by Step Guide for Beginners*. Sage Publications Ltd, London.

Date: 15 October 2008

Revision Date: March 2009

Change Tracking:

Indicate if changes were made to areas marked a, b, c, d or e above: Yes ☐ No ☐

Appendix B: Phase One Study Report from Learner Four

Student Four

1. Your overall perception of e-learning as impacted on by undertaking the EVENE module.

My perceptions of undertaking an EVENE module at first allowed me to become very optimistic. I felt that it offered me a chance to learn and to interact with business students across Europe, and thus would allow me to get an insight to their way of learning, and possibly develop into learning friendships over time. I thought that the module may be very time consuming and possibly of increased pressure from the module coordinator to meet certain deadlines, learning tasks, and interact with other students at fixed intervals. Overall, I thought that in undertaking this module, it would allow me to have a sample of student life abroad, without the hassle of actually relocating to that country, and therefore it evoked excitement to participate within the module.

2. Positive experiences encountered by you while undertaking the module (e.g. sense of achievement, senses of affiliation with other students, in control of own learning)

My positive experience with this module emerged at the start of the module, but was largely self promoted. I felt the sense of belonging to a wider academic forum a very positive experience, and I was excited by the prospects of promoting a higher level of learning and participation, and the desire to communicate with other European peers.

3. Negative experiences encountered by you while undertaking the module (e.g. frustration, disappointment etc.)

The negative experiences I encountered, to a great extent, outnumber the few positive experiences I had with this module. Firstly, I immediately felt the sense of isolation within this learning module. My initial perceptions of other Europeans demanding 'human contact' quickly diminished. To date, I could not tell you how many participants are undertaking this module, without actually logging on to the platform and counting them, as there was no informal participant 'introduction session' in the module. I have never been in contact with any other student undertaking this module – outside of the Irish participants, and this is only because of the fact that we are in the same college, and face-to-face contact was easy to achieve. This also allowed us to voice our frustrations with the lack of leadership, or guidance within the module with my peers in my college. If they were in another college, even within Ireland, I feel, little or no contact would have been experienced either. We had no knowledge of exam schedules, or even whether they were over. There was no effective method to vent our frustration or put questions to our tutor, through the use of the online platform. Although I wanted to successfully complete this module, I also felt that there would be no problem if I did not finish the module, and began to slowly drift away from the module, mainly due to the fact that I thought that this module was not going ahead, as I received no evidence (communication) to suggest that it was an active module.

4. The students opinion on what steps could be taken to improve their experiences while engaging in e-learning.

Firstly, like the traditional classroom environment, an introductory session is absolutely necessary, to allow students to get to know one another. This should be achieved through an online chat/video conference medium, scheduled for once a week, for example, every Friday at 1:00pm student must login and chat (perhaps award marks for participation). Secondly a tutor must allocate a specific period of time to support students, either through synchronous or asynchronous mediums.

Thirdly, tutors MUST specify what the learning outcomes are, how these will be achieved and when the examinations are scheduled for.

Finally, tutors must encourage collaborative learning activities, to exploit the notion of group learning activities, especially within a pan-European learning programme to promote mixed cultures (which is a great learning experience in itself)

5. Any major issues, related to undertaking the module, that arose for you.

One major problem that arose, apart from that listed above, was the lack of software in order to complete the exercises in the module. The exercises were the whole self-examination section of whether we understood the theory. Perhaps, if a college is offering a module that is heavily software dependant, it should be uploaded on their platform (subject to license policies) and allow students to temporarily use, or download the software). The college should at least assume that not all students can avail of this software, and provide links to that specific or alternative software.

Appendix C: Phase One Study Interview Guide for Learner Four

December 12th 2008: 11:30 – 12:00

Check

- 1) Mobile turned off
 - 2) Phone off hook
 - 3) Notice on door
 - 4) 3 recorders started
-
- 1) Initially felt optimistic – can you tell me what you were optimistic about
 - 2) Just how optimistic were you
 - 3) Felt a sense of belonging to wider academic forum
 - 4) You said that the negative experiences outnumbered the positive ones – Can you expand
 - 5) Sense of Isolation within the learning module – isolated from whom
 - 6) How did the isolation manifest itself
 - 7) No informal participant introduction session – how did this impact on you
 - 8) Lack of leadership and guidance within module – Can you compare the type of leadership you got to the type of leadership expected
 - 9) No mechanism to vent frustration with tutor – What type of mechanism would you recommend and why
 - 10) No introductory chat/video session – can you comment
 - 11) specified schedule for tutor to support students
 - 12) Learning outcomes not specified – How did this impact on your progress
 - 13) No encouragement of collaborative learning – How would more collaborative learning have impacted on experiences
 - 14) Lack of software - SPSS required but not available – Can you comment on this

Appendix D: Final Phase Interview Prompts for Caitlin

Interview with Caitlin

Date: 12/01/2011, Time 11:30.

Prompts

Did you feel you got a sufficient overview of it to sort of help you monitor your progress through it?

Were the learning objectives sufficiently communicated to you throughout the module?

Can you comment on efforts made to communicate instructions on achieving the learning tasks.

How did you feel about the podcasts, and do you feel they impacted on your overall results.

Can you comment on the textual elements of the module placed on Moodle

Can you comment on the audio feedback

Can you comment on the assessment scheme - assessment for the research methodology and one for the statistics. Did you feel that you were communicated, that you understood how you were going to be assessed?

How did you find Moodle itself? Cluttered, easy or difficult to use

Can you comment on support from the tutor

Did you feel part of an active learning community?

Can you comment on feedback, individual and general?

Do you think it was sufficient? Could it have been improved?

What was your best and worst learning experience and how could your experiences have been improved?

Appendix E: Questionnaire Data Analysis

2

Final Study Final Questionnaire

3

4

Q1

Q2

Q3

Q4

Q7

Q8

Q10a

Q10b

Q10c

Q10d

Q10e

Q10f

Q10g

Q10h

Q10i

Q10j

Q10k

Q10l

Q10m

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Q10v

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Q10aa

Q10ab

Q10ac

Q10ad

Q10ae

Q10af

Q10ag

Q10ah

Q10ai

Q10aj

Q10ak

Q10al

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Q10an

Q10ao

Q10ap

Q10aq

Q10ar

Q10as

Q10at

Q10au

Q10av

Q10aw

Q10ax

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Q10az

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Q10bb

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Q10bd

Q10be

Q10bf

Q10bg

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Q10bi

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Q10bl

Q10bm

Q10bn

Q10bo

Q10bp

Q10bq

Q10br

Q10bs

Q10bt

Q10bu

Q10bv

Q10bw

Q10bx

Q10by

Q10bz

Q10ca

Q10cb

Q10cc

Q10cd

Q10ce

Q10cf

Q10cg

Q10ch

Q10ci

Q10cj

Q10ck

Q10cl

Q10cm

Q10cn

Q10co

Q10cp

Q10cq

Q10cr

Q10cs

Q10ct

Q10cu

Q10cv

Q10cw

Q10cx

Q10cy

Q10cz

Q10da

Q10db

Q10dc

Q10dd

Q10de

Q10df

Q10dg

Q10dh

Q10di

Q10dj

Q10dk

Q10dl

Q10dm

Q10dn

Q10do

Q10dp

Q10dq

Q10dr

Q10ds

Q10dt

Q10du

Q10dv

Q10dw

Q10dx

Q10dy

Q10dz

Q10ea

Q10eb

Q10ec

Q10ed

Q10ee

Q10ef

Q10eg

Q10eh

Q10ei

Q10ej

Q10ek

Q10el

Q10em

Q10en

Q10eo

Q10ep

Q10eq

Q10er

Q10es

Q10et

Q10eu

Q10ev

Q10ew

Q10ex

Q10ey

Q10ez

Q10fa

Q10fb

Q10fc

Q10fd

Q10fe

Q10ff

Q10fg

Q10fh

Q10fi

Q10fj

Q10fk

Q10fl

Q10fm

Q10fn

Q10fo

Q10fp

Q10fq

Q10fr

Q10fs

Q10ft

Q10fu

Q10fv

Q10fw

Q10fx

Q10fy

Q10fz

Q10ga

Q10gb

Q10gc

Q10gd

Q10ge

Q10gf

Q10gg

Q10gh

Q10gi

Q10gj

Q10gk

Q10gl

Q10gm

Q10gn

Q10go

Q10gp

Q10gq

Q10gr

Q10gs

Q10gt

Q10gu

Q10gv

Q10gw

Q10gx

Q10gy

Q10gz

Q10ha

Q10hb

Q10hc

Q10hd

Q10he

Q10hf

Q10hg

Q10hh

Q10hi

Q10hj

Q10hk

Q10hl

Q10hm

Q10hn

Q10ho

Q10hp

Q10hq

Q10hr

Q10hs

Q10ht

Q10hu

Q10hv

Q10hw

Q10hx

Q10hy

Q10hz

Q10ia

Q10ib

Q10ic

Q10id

Q10ie

Q10if

Q10ig

Q10ih

Q10ii

Q10ij

Q10ik

Q10il

Q10im

Q10in

Q10io

Q10ip

Q10iq

Q10ir

Q10is

Q10it

Q10iu

Q10iv

Q10iw

Q10ix

Q10iy

Q10iz

Q10ja

Q10jb

Q10jc

Q10jd

Q10je

Q10jf

Q10jg

Q10jh

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Q10jj

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Q10jl

Q10jm

Q10jn

Q10jo

Q10jp

Q10jq

Q10jr

Q10js

Q10jt

Q10ju

Q10jv

Q10jw

Q10jx

Q10jy

Q10jz

Q10ka

Q10kb

Q10kc

Q10kd

Q10ke

Q10kf

Q10kg

Q10kh

Q10ki

Q10kj

Q10kk

Q10kl

Q10km

Q10kn

Q10ko

Q10kp

Q10kq

Q10kr

Q10ks

Q10kt

Q10ku

Q10kv

Q10kw

Q10kx

Q10ky

Q10kz

Q10la

Q10lb

Q10lc

Q10ld

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Q10ma

Q10mb

Q10mc

Q10md

Q10me

Q10mf

Q10mg

Q10mh

Q10mi

Q10mj

Q10mk

Q10ml

Q10mm

Q10mn

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Q10mt

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Q10mx

Q10my

Q10mz

Q10na

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Q10nc

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Q10ot

Q10ou

Q10ov

Q10ow

Q10ox

Q10oy

Q10oz

Q10pa

Q10pb

Q10pc

Q10pd

Q10pe

Q10pf

Q10pg

Q10ph

Q10pi

Q10pj

Q10pk

Q10pl

Q10pm

Q10pn

Q10po

Q10pp

Q10pq

Q10pr

Q10ps

Q10pt

Q10pu

Q10pv

Q10pw

Q10px

Q10py

Q10pz

Q10qa

Q10qb

Q10qc

Q10qd

Q10qe

Q10qf

Q10qg

Q10qh

Q10qi

Q10qj

Q10qk

Q10ql

Q10qm

Q10qn

Q10qo

Q10qp

Q10qq

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Q10rd

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Q10sm

Q10sn

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Q10sp

Q10sq

Q10sr

Q10ss

Q10st

Q10su

Q10sv

Q10sw

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Q10ur

Q10us

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Q10vm

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Q10vo

Q10vp

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Q10vr

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Q10vv

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Q10vx

Q10vy

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Q10wa

Q10wb

Q10wc

Q10wd

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Q10wm

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Q10bz

Q10ca

Q10cb

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Q10ci

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Q10cm

Q10cn

Q10co

Q10cp

Q10cq

Q10cr

Q10cs

Q10ct

Q10cu

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Q10fq

Q10fr

Q10fs

Q10ft

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Q10fx

Q10fy

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Q10ga

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Q10gv

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Q10gz

Q10ha

Q10hb

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Q10hd

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Q10hf

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Q10hl

Q10hm

Q10hn

Q10ho

Q10hp

Q10hq

Q10hr

Q10hs

Q10ht

Q10hu

Q10hv

Q10hw

Q10hx

Q10hy

Q10hz

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Q10md

Q10me

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Q10mp

Q10mq

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Q10pa

Q10pb

Q10pc

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Q10pf

Q10pg

Q10ph

Q10pi

Q10pj

Q10pk

Q10pl

Q10pm

Q10pn

Q10po

Q10pp

Q10pq

Q10pr

Q10ps

Q10pt

Q10pu

Q10pv

Q10pw

Q10px

Q10py

Q10pz

Q10qa

Q10qb

Q10qc

Q10qd

Q10qe

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Q10sc

Q10sd

Q10se

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Q10sh

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Q10sj

Q10sk

Q10sl

Q10sm

Q10sn

Q10so

Q10sp

Q10sq

Q10sr

Q10ss

Q10st

Q10su

Q10sv

Q10sw

Q10sx

Q10sy

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Q10ta

Q10tb

Q10tc

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Q10tp

Q10tq

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Q10ts

Q10tt

Q10tu

Q10tv

Q10tw

Q10tx

Q10ty

Q10tz

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Q10ub

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Q10ud

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Q10uh

Q10ui

Q10uj

Q10uk

Q10ul

Q10um

Q10un

Q10uo

Q10up

Q10uq

Q10ur

Q10us

Q10ut

Q10uu

Q10uv

Q10uw

Q10ux

Q10uy

Q10uz

Q10va

Q10vb

Q10vc

Q10vd

Q10ve

Q10vf

Q10vg

Q10vh

Q10vi

Q10vj

Q10vk

Q10vl

Q10vm

Q10vn

Q10vo

Q10vp

Q10vq

Q10vr

Q10vs

Q10vt

Q10vu

Q10vv

Q10vw

Q10vx

Q10vy

Q10vz

Q10wa

Q10wb

Q10wc

Q10wd

Q10we

Q10wf

Q10wg

Q10wh

Q10wi

Q10wj

Q10wk

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Q10wm

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Q10wo

Q10wp

Q10wq

Q10wr

Q10ws

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Q10wu

Q10wv

Q10ww

Q10wx

Q10wy

Q10wz

Q10xa

Q10xb

Q10xc

Q10xd

Q10xe

Q10xf

Q10xg

Q10xh

Q10xi

Q10xj

Q10xk

Q10xl

Q10xm

Q10xn

Q10xo

Q10xp

Q10xq

Q10xr

Q10xs

Q10xt

Q10xu

Q10xv

Q10xw

Q10xx

Q10xy

Q10xz

Q10ya

Q10yb

Q10yc

Q10yd

Q10ye

Q10yf

Q10yg

Q10yh

Q10yi

Q10yj

Q10yk

Q10yl

Q10ym

Q10yn

Q10yo

Q10yp

Q10yq

Q10yr

Q10ys

Q10yt

Q10yu

Q10yv

Q10yw

Q10yx

Q10yy

Q10yz

Q10za

Q10zb

Q10zc

Q10zd

Q10ze

Q10zf

Q10zg

Q10

Appendix F: Summary Data Analysis of Q2 and Q3

Question 2.

Please estimate the percentage of the research methodology module delivered to you online and the percentage of this module delivered in classroom:

Question 3.

With reference to this module, please estimate the percentage of learning you achieved working individually, and the percentage you achieved working with groups:

Summary analysis using Microsoft Excel

Question	2	3
Avg	57%	69%
Mode	50%	80%
Median	60%	75%
Max	70%	100%
Min	40%	30%
Range	30%	70%
1st QRT	50	50
3rd QRT	61.25	80
IQR	11.25	30

Appendix G: Thematic Count Analysis

Question 18 - Thematic Count

Please comment on how you're learning experience may have been improved

	Qnaire #	Count
Improve timing e.g. Present research proposal later	1,	1
More group interaction (also said time constraints make participation difficult)	2,16	2
Very satisfied with experience as was	1, 4,14	3
More examples	5,	1
Proper explanation of problems during class	6,	1
Award marks for engaging with forums	7,	1
Clearer demarcation between statistics and research methodology	8,10	2
Revision after every class	11,	1
Less class and more online	12,13	2
No statistics	12,	1

Appendix H: Chi-Square Tests for Statistical Significance

CHI Squared Tests for Statistical Significance Difference in Categorical Counts

Chi Squared Test for statistical significance - An Active Learning Community (Table 5.8)

	Agree/Strongly Agree	All Other Categories	Totals
Observed	60.0000	15.0000	75.0000
Expected	37.5000	37.5000	75.0000
(Obs-Exp)^2/Exp	13.4401	13.5601	27.0001

CHI SquaredTest Statistic 27.0001

CHI SquaredTest Critical value, 1df, alpha .001 10.83

Statistical significance - Active learning community - the engagement of learners (Table 5.10)

	Agree/Strongly Agree	All Other Categories	Totals
Observed	56.0000	22.0000	78.0000
Expected	39.0000	39.0000	78.0000
(Obs-Exp)^2/Exp	7.3667	7.4539	14.8206

CHI SquaredTest Statistic 14.8206

CHI SquaredTest Critical value, 1df, alpha .001 10.83

Statistical significance - Communications of Module Elements (Table 5.13)

	Agree/Strongly Agree	All Other Categories	Totals
Observed	93.0000	18.0000	111.0000
Expected	55.5000	55.5000	111.0000
(Obs-Exp)^2/Exp	25.2703	25.4055	50.6758

CHI SquaredTest Statistic 50.6758

CHI SquaredTest Critical value, 1df, alpha .001 10.83

Appendix I: The Research Proposal Assessment Breakdown Criteria and weightings

Assessment Breakdown Criteria and weightings

1. Structure (e.g. TOC, S&C, Pg #, Bib etc.)	C1	5
2. Research Question/objectives	C2	10
3. Preliminary Literature Review	C3	20
4 Focus of the study	C4	10
5. Justification	C5	15
6. Target Population	C6	5
7. Research Methodology	C7	10
8. Why I believe worthwhile	C8	5
9.Limitations/Difficulties	C9	5
10. Innovativeness	C10	10
9. Writing and presentation	C11	5
Total		100

Appendix J: Post Module Questionnaire (Phase Three)

Student e-Learning Experience Questionnaire

Dear Student

The attached questionnaire has two purposes:

- 1) To help improve student experiences while undertaking e-learning
- 2) To contribute to my PhD research by facilitating the following study:

E-LEARNING: DESIGNING TO IMPROVE STUDENT EXPERIENCES

This questionnaire is designed to assist me in evaluating your e-learning experience while undertaking the research methodology module just completed. I want your voice to be heard and to be instrumental in improving the e-learning experiences of learners. For that reason, and in order to facilitate follow up, you are requested to include your email address and/or your mobile number, so that, if you feel strong regarding any issues, a short informal interview may be arranged with you. Please be aware, that should you be requested to partner me in the ongoing research, that **your anonymity will be respected and your name will not be mentioned or appear in print.**

This questionnaire may be completed manually or may be accessed and completed electronically on Moodle. Please note that this questionnaire is part of an ongoing study which aims to give a voice to students and enable that voice to help understand and improve student experiences.

The questionnaire takes approximately 20 minutes to complete. Your cooperation in completing it is greatly appreciated. If you have any queries please email me (Kevin Heffernan) at kevin.heffernan@gmit.ie . Alternatively you may text me at 087 6062466. Please return the completed Questionnaire to:

Kevin Heffernan, Dept of Business, GMIT, Dublin Rd, Galway.

With Thanks - Kevin Heffernan:

Note: This questionnaire refers to your e-learning experiences while undertaking the Module – Research Methodology in Blended learning Mode

THIS QUESTIONNAIRE REFERS TO THE RESEARCH METHODOLOGY MODULE JUST COMPLETED BY YOU.

1.

Please Enter Your Name:

2.

Please estimate the percentage of the research methodology module delivered to you online and the percentage of this module delivered in classroom:

<u>Percentage of Delivery</u>	<u>Percentage</u>
Percentage delivered online	
Percentage delivered in classroom	
Total	<u>100%</u>

3.

With reference to this module, please estimate the percentage of learning you achieved working individually, and the percentage you achieved working with groups:

Type of Work	Percent
Individual Work	
Group Work	
Total	100%

4.

Please specify, which of the following sentences, best describes your feeling with reference to question 13 above.	<i>Please tick a,b OR c</i>
a) I would have preferred a higher proportion of individual work.	<input type="checkbox"/>
b) I would have preferred a higher proportion of group work.	<input type="checkbox"/>
c) I was happy with the proportion of individual work to group work	<input type="checkbox"/>

5.

Please specify, in order of significance, **three advantages**, in undertaking the research methodology module in blended mode, as opposed to studying the module traditionally:

Advantage One (*Specify N/A if not applicable*): _____

Advantage Two (*Specify N/A if not applicable*): _____

Advantage Three (*Specify N/A if not applicable*): _____

6.

Please specify, in order of significance, **three disadvantages** in taking the research methodology module in blended mode, as opposed to studying the module traditionally.

Disadvantage One (*Specify N/A if not applicable*): _____

Disadvantage Two (*Specify N/A if not applicable*): _____

Disadvantage Three (*Specify N/A if not applicable*): _____

Note: Questions 7 and 8 refer to the quality of your e-learning experience in terms of positive emotions (e.g. sense of achievement, sense of belonging etc.) and negative emotions (e.g. sense of frustration, feelings of isolation, etc.)

7.

Please specify, which of the following sentences, best describes your expectations regarding the quality of your e-learning experience at the commencement of the research methodology module	<i>Please tick a, b OR c</i>
a) I expected the quality of my e-learning experience to more positive than my traditional class room experiences	<input type="checkbox"/>
b) I expected the quality of my e-learning experience to be more negative than my traditional class room experiences	<input type="checkbox"/>
c) I expected the quality of my e-learning experience to be much the same as my traditional class room experiences	<input type="checkbox"/>

8.

Did your e-learning experience live up to your expectations?	Yes	No
	<input type="checkbox"/>	<input type="checkbox"/>

9.

Please comment on your answers to question 8 above

Comment: _____

10.

Please indicate your level of agreement or disagreement with each of the following statements regarding the research methodology module

	Statement	Strongly Disagree	Disagree	No Opinion	agree	Strongly Agree
a	I was provided with a clear outline/overview of the research methodology module					
b	The module overview was in sufficient detail to allow me monitor my progression through it					
c	The learning objectives of the research methodology module were clearly specified					
d	I was communicated clear instructions on achieving the learning tasks of the research methodology module					
e	A fair assessment scheme for the assessment elements of the module was communicated to me					
f	The research methodology lecturer communicated enthusiasm for the module					
g	The research methodology lecturer communicated high expectations to me while undertaking the module					
h	I find it motivating if the lecturer has high expectations of me					
i	I was aware of the value of engaging in an active learning community while undertaking the module					
j	I was aware that I was expected to engage in discussion forums while undertaking the research methodology module					
k	I found it easy to access the Moodle learning resources for the research methodology module					
l	I found it easy to navigate through the learning resources on Moodle for the research methodology module					
m	The hyperlinks in Moodle worked well for the research methodology module					
n	The meaning of textual elements in Moodle were clear for the research methodology module					
o	Moodle seemed cluttered to me when I logged on to the research methodology module					
p	I found the research methodology lecturer easy to contact while undertaking the module					
q	I felt the research methodology lecturer was aware of levels of online participation during the module					

11.

Please indicate your level of agreement or disagreement with each of the following statements regarding the research methodology module

	Statement	Strongly Disagree	Disagree	No Opinion	agree	Strongly Agree
a	A fair assessment scheme for the research methodology module was communicated to me					
b	I found it easy to approach the research methodology lecturer with problems while undertaking the module					
c	The research methodology lecturer adopted a friendly tone					
d	The research methodology lecturer adopted a supportive tone					
e	The research methodology lecturer responded quickly to questions					
f	The research methodology lecturer pointed me towards new and emerging materials					
g	If the lecturer was unavailable for a period of time I had enough learning resources to continue progression through the module					
h	The research methodology lecturer communicated the value to participating in discussion forums					
i	The research methodology lecturer communicated the value of participating in an active learning community					
j	The research methodology lecturer communicated the expectation that I engage with discussion forums					
k	I felt the research methodology lecturer was monitoring activity on discussion forums.					
l	I felt the research methodology lecturer encouraged non contributors to contribute to discussion forums					
m	The research methodology lecturer encouraged the class to get involved in study groups to prepare for exams					
n	There was a sense of intimacy among learners in the research methodology class					
o	I felt part of an active learning community while undertaking the module					
p	I was encouraged to get involved in study groups while undertaking the research methodology module					
q	I discussed solutions to problems with other learners while undertaking the module					
r	Networking and sharing with other learners was important to me while undertaking the module					
s	I work best when working in groups					
t	I work best when working alone					

12.

Please indicate your level of agreement or disagreement with each of the following statements regarding the research methodology module

	Statement	Strongly Disagree	Disagree	No Opinion	agree	Strongly Agree
a	Instruction for achieving learning tasks were provided clearly					
b	Personal feedback was provided when the required learning outcomes were not achieved					
c	Personal feedback was provided when the required learning outcomes were achieved					
d	Feedback was provided in a reasonable time while undertaking the module					
e	It was very important to me to receive timely feedback while undertaking the research methodology module					
f	The lecturer was aware of student needs during the course of this module					
g	The lecturer was responsive to student needs during the course of this module					
h	While undertaking this module, I felt part of an active learning community					
i	The module was designed to encourage collaboration with other students on learning tasks, projects etc.					
j	The tutor encouraged collaboration with other students on learning tasks, projects etc.					
k	Collaboration with other students on learning tasks, projects etc., improved my learning outcomes					
l	More collaboration with other students on learning tasks, projects etc., would have improved my learning outcomes					
m	More collaboration with other students on learning tasks, projects etc., would have improved my e-learning experience					
n	Social interaction with other students (e.g. face to face, facebook, etc.) while engaging in e-learning is not important to me as part of my e-learning experience					
o	Social interaction with other students (e.g. face to face, facebook, etc.) is important to me for achieving learning outcomes					

13.

Did you find Podcasts posted on Moodle useful while undertaking the research methodology module?	Yes	<input type="checkbox"/>
	No	<input type="checkbox"/>

14.

Please comment on your answer to 13

above: _____

15.

Did you find audio feedback on Moodle useful while undertaking the research methodology module?	Yes	<input type="checkbox"/>
	No	<input type="checkbox"/>

16.

Please comment on your answer to 15

above: _____

17.

Please specify, which of the following sentences, best describes your feeling with reference to your e-learning experience

*Please
tick a,b
OR c*

a) My e-learning experience did not live up to my expectations	<input type="checkbox"/>
b) My e-learning experience lived up to my expectations	<input type="checkbox"/>
c) My e-learning experience exceeded my expectations	<input type="checkbox"/>

18.

Please comment on how you feel your learning experience may have been improved while undertaking this module:

19.

Please comment on any issues, factors, or considerations you deem to be important to the **successful completion** of this course or module.

20.

Any additional comment you would like to make relevant to this study?

You cooperation in completing this questionnaire is very much appreciated.

With Thanks

Kevin Heffernan

Appendix K: Post Interview Impressions, Transcripts, Interviewee Voice and Data Coding

Introduction

Data analysis was conducted in four phases; the '*post interview impression phase*', which was conducted immediately after each interview, the '*interview transcript and coding phase*', the '*capturing the interviewee voice phase*' and the '*comment to theme phase*'. The post interview impressions are presented prior to each transcript. The interviewee voice is recorded as comments added to each transcript. The output from the latter is presented as comments added to the transcripts. These comments constitute the input for the '*comment to theme phase*' which provides the basis for the discussion on the findings.

Brian: Post Interview Impressions and Interview Transcript

Post Interview Impressions

Brian is a lecturer at the GMIT. He is in his late 50's but full of gusto and enthusiasm. Both **Brian** and I were a little apprehensive as we are colleagues in addition to being tutor and learner, and I felt **Brian**, because of his high sensitivity to the feelings of others, may find it difficult to be critical. However, I did reiterate the need for honesty as nothing short of it would serve me or the research. It quickly became clear that the module lived up to his expectations. **Brian** had been very apprehensive about undertaking his dissertation and I was aware that his fellow learners saw him more as a lecturer than a fellow student so this perhaps added a little more pressure to him. **Brian** is a lifelong learner, loves the business and marketing fields and really wants to do well.

With reference to this module, **Brian** felt the learning objectives were well structured and the marking scheme very clear. He seemed to very much appreciate (in particular for other learners) the accessibility of the tutor. He seemed to think that feedback (individual and general) was built into the module and that learners would have needed to be asleep not to get adequate. He also seemed to feel that participating learners could gauge their own progress through the module.

Interview Transcript and Coding

Kevin

I just want to thank you; I really, really appreciate this

Brian: Glad to help out.

Kevin: I'll just go through a few factors or a few of the eh considerations regarding your experience while undertaking the module and I suppose the first thing I would like to ask you is, at the outset of the module did you feel that you got a reasonable overview of the module did it facilitate you in monitoring your progress through

Brian: Yes, yes I believe I did yes

Kevin: How important was that for your experience do you think

Brian: Well as a mature student and at my age I wanted to feel comfortable with the subject matter, but yes, I had, I felt comfortable with it, I had a good feel for it, it kinda met my expectations of what it would be, it was the first I'd ever done in my life, like the blended learning mode and certainly met my expectations. I didn't at all feel uncomfortable with it and once you had the Internet you could work on it at home.

Comment [K1]: G – Blended learning met Brianns' expectations – he was comfortable with it; 'like the blended learning mode and certainly met my expectations. I didn't at all feel uncomfortable with it and once you had the Internet you could work on it at home'

Kevin: Ye, ye, and I felt that you as a mature student seemed to have some insecurities

Brian: I had yes, I suppose I was ye, I was a little bit at my age I didn't think I'd have the energy for it, I suppose like yourself I had a very heavy teaching load...and I wanted to do well in it. At my stage in my career it is for self actualisation that I am do this, for myself, it has no career implications which is probably the best way (with a grin)...I put myself under pressure, but eh no, I settled into it after a while, certainly have enjoyed it and done well in it.

Kevin: Ye, how did you feel about the blended mode

Brian: The blended mode was very interesting because eh, you could take time to work on problems on your own and I mean eh, it was individual work, and the other thing to eh, not alone were you getting the correct solutions but you were also seeing the way other people were thinking and I found that...probably mentally my acuity would not be as strong as that of, we will say 20 somethings, I found I was well able for it, which in itself was reassuring

Comment [K2]: GP - Brian had positive experience with blended learning

Kevin: Ye, ye, you seemed to bring a maturity to it

Brian: Well I hope so, certainly, I certainly enjoyed it, it was a very innovative way of delivering the course and I certainly think I learned a lot, particularly the concepts and I found them in the statistics, I'd have done maths at school, integral, differential calculus, never understood what they meant it was very axiomatic fitting formula but at least with the statistics...the podcast on the normal distribution, it was very good so, eh, it was innovative, it was very good, it was, so it was it was a good module

Comment [K3]: PP – Brian sees advantage in Discussion Forum – 'getting the correct solutions and seeing how others were thinking' – useful as Brian felt his mental acuity would not be as strong as younger learners; 'not alone were you getting the correct solutions but you were also seeing the way other people were thinking'

Comment [K4]: G – Brian thought the module was delivered in an innovative way and felt he learnt a lot; 'it was a very innovative way of delivering the course and I certainly think I learned a lot

Kevin: And with regard to the learning objectives **Brian**, were you comfortable that, number one you understood them and were they any way daunting to you

Brian: They were daunting, yes they were and I suppose in fact for exam purposes I had to form some sort of selection, I did seem to have a mental block with the eh binomial distribution, I wasn't quite sure what it was, but with several of the topics I felt particularly at home with them, there were a few of them, I said I'd play the exams game and I'd concentrate on ones that I felt happy with. Because...I mean there was a learning outcome and there was an exam to pass, for that reason yes

Comment [K5]: PP Brian seems to have understood the learning objectives – he found them daunting

Kevin: And you have time management issues

Brian: There were time management issues as well, family, work of course and eh you know study

Kevin: You seem to be quite comfortable that the learning objectives were reasonably clear

Brian: Oh yes, oh yes, yeah. They were do-able, yes, absolutely. The learning objectives were clear, I mean there were a structure to it you know, the material was put up on Moodle and I would say that the only thing is that the lecturer, that's you yourself Kevin, that you probably didn't have sufficient time to do it in the depth that you would have liked to have done it in, you didn't have time, but that's a, that's nothing to do with you or me as such, that's an organisational bit, that has implications for the institute, I think so, ye

Comment [K6]: PP - Brian feels the learning objectives were clear; 'The learning objectives were clear, I mean there were a structure to it you know, the material was put up on Moodle'

Kevin: And **Brian**, the individual learning tasks, now people have difficulty with the concept of individual learning tasks, what I suppose, concepts such as the process of doing some of these tests, I'm just wondering if, how you felt about the instructions you got, the clarity of the instructions you got on achieving individual learning tasks

Brian: Are we talking about...well I didn't really understand it, I felt it would probably involve too much time, now maybe it's not that difficult at all but I felt that probably for the sake of time management I played the student game and I actually worked at subjects, worked at topics that I felt I understood well and I could delve into them a little bit more...I felt that. I struggled with some of them at first but what I did then was I did my own worked examples, I changed parameters, I changed values and I'd actually work out my own and once I felt comfortable with them then I was able to, I did pretty well in the...

Comment [K7]: PP - Brian found instructions on the learning tasks (statistics) difficult at first but became comfortable with them.

Kevin: It seems **Brian**, you, your sort of strategy was to take some elements of it and to master them

Brian: I would say to take most elements of it and master them but not all elements, there were some of them that I didn't eh, particularly as I said the binomial distribution, to this day I still don't understand it fully but the normal distribution... data display and Baye's theorem etc, I was comfortable with those I also felt that, you know, I was more interested in bringing in their management implications rather than just pure maths, you know what would this mean to me as a manager and because I engaged in it in that manner I found it very interesting and it would be useful for managers not whether a 22 year old sees that Kevin I don't know.

Kevin: Ye quiet often actually you know I suppose people...

Brian: Now if I could just continue with the research methodology lectures, you know I really struggled with getting you know kind of primary objectives and secondary objectives right there in that. I was probably looking too deeply into that part of the course when in fact when it's done and passed etc it's straight forward, my problem is that I had never done a research dissertation, I had done a lot of project work, yes, but I had never done anything like that before, for the very simple reason I have a Masters but its 30 years old and it was done by exam and oral, that was it.

Kevin: I think the tendency **Brian** which I have seen now, I don't have a huge experience teaching research methodology but just to see could you associate with the concept that students want to achieve everything with regard to setting objectives and it seems very difficult to get them to focus on a simple clear and precise...objective

Brian: I have discovered that it is also a work in progress for several weeks and may, you know involve fine tuning over a period of time to get it just right, that there is nothing set in stone from day one, not at all, I've learnt that, I didn't know that before embarking on that module.

Kevin

Were you happy that you got there eventually?

Brian: Oh I was yes, absolutely, yes, I was indeed

Kevin: Now, **Brian**, the assessment scheme...there is two things I really want to know about it, number one if you felt you were made reasonably aware of how you were going to be assessed, and number two about the fairness of it. If we take those one at a time

Brian: Well first of all you gave very clear, I mean for the research proposal, I mean, you did give a very clear marking scheme to the class. It was up on Moodle and you also gave us that so it was actually crystal clear for anyone who was engaging at all with the programme, how that was going to be done and certainly with regard to the exam component, that's the probability...that was very clear as well, perhaps what wasn't clear was perhaps would there be a weighting in it for the application to management, finding the correct solution but perhaps what wasn't so clear was what implications would be for managers, now I thought maybe that could have been developed more in the class for learners. I saw that but that was as a mature student. That's why the subject made sense to me, however, if my son Ian who is 22 was doing that course, he has a 2.1 business degree he mightn't quire see it that was so I don't know Kevin for me it worked fine. For me it worked fine

Comment [K8]: PP - Brian felt the assessment scheme was very clear. However, the external examiner recommended more focus on the management implications of the results of the statistic test – this may have not been clear to the class; 'Well first of all you gave very clear, I mean for the research proposal, I mean, you did give a very clear marking scheme to the class'

Kevin: No but I can actually see that because the external examiner intervened and wanted more focus on the management interpretations so...that makes absolute sense that you would say that so that is good to know for coming years

Brian: You did say that so

Kevin: So that's one element of it – the communications and the second element of it, did you think it was fair?

Brian: Oh yes, I thought it was very fair, absolutely it was fair. It was fair ye, students would have a good idea of what types of questions were coming up that's in the exam component. In the continuous assessment component the research proposal, I mean there was access to supervisors before the final research proposals were put in. I think the college, the mechanisms swung in very well to favour student and particularly I mean the fact that we had foreign learners in the class I would say that the institute was actually most fair with learners. I mean I am speaking as an educationalist myself...I would say yes to that question.

Comment [K9]: PP - Brian felt the assessment scheme was fair; 'Oh yes, I thought it was very fair, absolutely it was fair'

Kevin: Now the online environment, I'm talking about when you went on to Moodle, how did you find it?

Brian: I found it..., I found Moodle very good, I use Moodle myself with the marketing, it's mostly information. I download slides for the students to give them a structure to the course, but of itself it's not sufficient eh, In your particular case, I mean you put up worked examples, particularly coming up to the exam I found it very good for revision purposes accessibility, once you had a good computer...you know you were online, there were no snags, certainly I haven't ever come across a time when I just couldn't access material I wanted to access at a given time I found it good I found access to it good and I found the content very good too and very relevant and easy to and easy to understand

Comment [K10]: G - Brian felt he had easy access to the information he wanted on Moodle and he found the content 'good', 'clear' 'relevant' and 'easy to understand'; 'haven't ever come across a time when I just couldn't access material'

Kevin: How about the environment, did you find a bit of clutter? Was there any frustration? Did you experience any frustration on Moodle?

Brian: Em... one time something was supposed to be up and I couldn't access it, there might have been one time Kevin, but I mean given, you know, the nature of our work here and I mean I kind of have to be half colleague and half student at this time em, very little, I would say negligible, negligible but you could always, it's all bandwidth at home. I could come up to my pc and access it there was never an issue with it.

Kevin: Did you feel at any stage that the learners or students in the class would have, could have been supported with a bit of training in the use of Moodle or discussion forums or anything?

Brian: I don't know, I mean they are quite; they are quite a literate bunch, even our foreign students, I mean they are well versed in IT. I don't know what their experience of blended learning or online learning is but they would be every bit as home with computers as someone like me. They would be, I mean they have grown up with them. For me its relative late in life I've... I understand them...so I think, ye the other students, I don't think I certainly think I mean, they, they should have been able to engage with it every bit as much as I did. I engaged with it completely, they are more...I would believe that the class were every bit at least as computer literate as I

Kevin: What was the biggest obstacle to you in accessing Moodle or spending time online?

Brian: There were no obstacles, I don't remember any obstacles. There might have been one occasion when I was looking for material and it wasn't up. But that might have been a delay or something may have intervened or indeed as we know an (?????) at the college. So really Kevin, I'd have to say that wasn't an issue.

Comment [K11]: G- Brian had no obstacles in accessing Moodle or spending time online; 'There were no obstacles, I don't remember any obstacles'

Kevin: So **Brian**, I'll just move on to the next item and that's the concept of active leadership...you know the perception that there is active and evident and accessible leadership for the duration of the module...and of course I'm talking about the module leader or the tutor. How did you feel there?

Brian: I felt very comfortable; I think you were very accessible. You were perceived by the young people in the class as being very accessible very fair, giving very good advice and it was obvious to them that you took an interest in them and their welfare. That was very much appreciated.

Comment [K12]: PP - Brian perceived accessible leadership; 'I felt very comfortable; I think you were very accessible. You were perceived by the young people in the class as being very accessible very fair, giving very good advice and it was obvious to them that you took an interest in them and their welfare. That was very much appreciated'

Kevin: How important do you think that is **Brian**

Brian: I think that it is very important and I think it is particularly important for foreign students who because of language difficulties might find the environment a little bit hostile...they tend to cluster together and find it difficult to make friends...so I thought that was very important for a good number of people in the class, five or six people in the class. Maybe a third, you know who are foreign nationals and eh I thought the leadership given and the care that the tutor had for the class, I thought that was remarkable and very much appreciated.

Comment [K13]: PP - Active leadership; 'eh I thought the leadership given and the care that the tutor had for the class, I thought that was remarkable and very much appreciated'

Kevin: Do you think it would have had a motivational impact? (14.00)

Brian: Oh I think so. I think that people realized that if they did the things you said that they should do, that's engage in Moodle, ask questions, get involved in class, muck in. But you would expect at Masters level. I mean they weren't really recipients of learning. They are actually creators of their own learning space. I believe they are and I think, can I just repeat the first bit of your question. I may have strayed of track there. Can you repeat that again Kevin?

Comment [K14]: PP – the motivational impact of active leadership

Kevin: Ye we were talking about the active leadership... the evidence of it and I suppose for the want of a better word the comfort ability of students in accessing that

Brian: Oh ye, the active leadership... I think the students, the way the tutor delivered the lectures the students realized that if they would actually engage in Moodle and particularly as I said participate in class, that they would feel. I heard some of them comment that this wasn't going to be a subject they were overly worried about that they felt they were well prepared for it. I heard them say that. Which is good and that's a positive thing to know.

Comment [K15]: PP- learners felt that if they took the tutors advice they would do ok: 'the way the tutor delivered the lectures the students realized that if they would actually engage in Moodle and particularly as I said participate in class, that they would feel. I heard some of them comment that this wasn't going to be a subject they were overly worried about that they felt they were well prepared for it. I heard them say that. Which is good and that's a positive thing to know'

Kevin: And I suppose **Brian** that leads us to the next issue and that's the learning community you know the concept of developing in a classroom an active learning community where people are taking responsibility for their own learning and supporting one another and sort of developing expertise as a group

Brian: I Em, I have, I don't know in the sense that I tended to work on my own with this em. I imagine that they formed clusters and book study rooms to go over problems I suspect that would have happened because it happened in other subjects. It certainly happened in mine so I would not be one bit surprised if that happened informally, that informal groups got together to help each other out and explain things to each other. Personally a few of them approached me when we started doing basic probability. Caroline and others and eh who else, somebody else, Caitlin they hadn't really so I just basically went through kind of permutations, the very very basic material to give them a feel and I think once they knew. Ye see, somebody in their forties who hadn't done maths since leaving cert or might have (16:15) done a little bit of quantitative methods in college at the age of 18 or 19, that's a long long time to be away from it. The subject appears very intimidating so some of them came. I was literally really half a step ahead of them at that stage but the perceived me to be a lecturer as distinct from a class mate. I mean I am good at explaining things like you are. So that reassured a few, a very few of them, but I have no doubt though to extrapolate that experience that the students themselves formed their own clusters and I'm sure, I've no doubt that you would have seen groups of them around a laptop working on a problem, I've no doubt at all that that happened. I haven't seen it but I have no doubt that it happened given my experience with...

Comment [K16]: PP - Brian feels informal study groups evolved in the class

Kevin: Ye I did and I did see them sort of looking towards you at times.

Brian: Yes, ye

Kevin: To me looking in, you know because the level because the lecturer, there has to be a bit of separation there

Brian: Oh there has, there has to be absolutely

Kevin: It did seem to me that a number of people, that clustering concept alright, it hit me, it did seem like you got sort of these little groups and within the class

Brian: I would say that they formed yes... Well first of all, if you take the Chinese students. I think they share a house I would imagine that they would be working late into the night... I don't know about the two Polish ladies em and the Saudis I'm sure they did as well. I imagine they did because first of all I mean they speak a common language it helps them cement a cluster together to discuss material. So I have no doubt it happened. So if that's the definition of a community I would say not so much a community where there was a lot of interaction between everybody, I would say that there were a lot of little communities, tiny groupings within the class. I would say that there were as many as five or six out of the 18 or 19.

Comment [K17]: PP - Brian felt that study groups were formed; 'I would say that they formed yes'

Kevin: Did you think there was reasonable use of discussion forums? Within the class.

Brian: Oh yes, particularly when they came up to the exam time. I mean people were, people put up, eh, people put up eh solutions, their solutions. Some of them were incorrect but that was good, ye, that was good. You know that people learnt from that, that was very good, a very positive thing. I think they did and I mean particularly before the exam there was a big flurry of activity on Moodle as you saw, but not everybody participated in it. But most people did. I think so

Comment [K18]: PP - Brian comments on the benefits of discussion forums particularly before exams; 'particularly before the exam there was a big flurry of activity on Moodle'

Kevin: And finally **Brian** I am just going to ask you about the provision of general and personal feedback; general feedback to the class and personal feedback on individual problems and difficulties. How did you think that ran? How well did that run? And how important was it

Brian: From the lecturer to the student?

Kevin: Ye, ye there are really several elements to feedback first of all at a general level to the class and secondly on individual learning problems. You know you would have both positive and negative feedback.

Brian: Well first of all there was a couple of things here. Number one we will say the research proposal part of it which formed 50% of the module. Once people engaged you know, there was a jury system, you got immediate feedback from stage one once you put in your draft one. There was a bit of work to be done to modify the proposal. The marking scheme was fair in the sense that to get everyone started they felt reassured that you know there was a bit of fairness with the first part of it. Then there would have been more feedback obviously on an individual level from the dissertation supervisor and then coming to the maths there would have been feedback, in the sense that if someone got a right solution they would present it in class. The feedback was subtle in the sense that it wasn't very good job done. I think people in an online learning community; I think people could see, I think it was a subject where people could see themselves how they were getting on. Now the research proposal, I mean it would have been regarded as an unusual run because there were two I suppose very different tasks that will merge later on when it comes to field work and analysis of data etc. But it would have been regarded as a kind of multidimensional type of...type of a module. And feedback, I think there was so much activity going on in it that people unless they were asleep they could not have not got feedback. I think so, it was unusual. There was a lot, a hell of amount of activity. I mean you were very accessible, people would have been asking you how they were getting on and all that and I think it was reassuring. I think people who really worked at the subject would have done well in it. I think so. I thought the blended mode was very interesting. But there were two distinct brands to that. So feedback in general would have been better than average I think for a module. Definitely, I do, I think so.

Comment [K19]: PP - Brian felt there was immediate feedback; 'you got immediate feedback from stage one once you put in your draft one'

Comment [K20]: PP - Brian feels people could gauge their own progress; 'I think it was a subject where people could see themselves how they were getting on'

Comment [K21]: PP - Brian felt that people would have had to be asleep not to have got feedback; 'unless they were asleep they could not have not got feedback'

Comment [K22]: PP - Brian feels feedback was better than average; 'So feedback in general would have been better than average I think for a module'

Kevin: And **Brian** finally I am going to ask you, you know you undertook this module as eh would, at an emotional level did, what was your experience like? Now I know this is a difficult one...I'm talking about a sense of achievement maybe senses of frustration was there any sort of emotions invoked in you that are worthy of comment...?

Brian: Well first of all I don't know if they are worthy of comment yes they are personal but for me I had done under staff development a business degree and it went very well for me because at the time we felt that some of us were being dumped out of other faculties... and I said, look, I am not ready to go yet and I'll do something. I'll redeploy and to me it made perfect sense to do a course in my own institute. After all if I was in the army or the civil service or bank of Ireland or whatever, I'd be doing in-house courses so to me it was quite normal even though some colleagues might have said are you out of your mind no I mean I actually enjoyed it because I have an inquisitive mind and I read I am a voracious reader and eh I thoroughly enjoyed the experience and I said listen I'd like to continue on and sign up for the Masters and I found Larry in particular very supportive em the institute and of course my own head of school, Mary she's go with it. It is in the colleges interest, I mean you do teach a bit of business studies, that you have a Masters in Business Studies. I said thanks... that if there is an academic audit or anything like that... so yes there was a certain amount of emotional engagement with it but...very much in an enjoyable sense because once I get the dander up about a thing I kind of tend to stick with it. I think you know that.

Kevin: I've seen that **Brian**. I have seen that ye.

Brian: But that..ask me am I enjoying it? Well I wouldn't do it if I couldn't (enjoy it).I'd do something else

Kevin: Well would your overall experience bad, middling, good

Brian: Oh highly positive, highly positive, very much so, yes.

Brian is thanked and interview concluded.

Comment [K23]: G – Brian's experience was highly positive; 'Oh highly positive, highly positive, very much so, yes'

Brian: Oh I think so. I think that people realized that if they did the things you said that they should do, that's engage in Moodle, ask questions, get involved in class, muck in. But you would expect at Masters level. I mean they weren't really recipients of learning. They are actually creators of their own learning space. I believe they are and I think, can I just repeat the first bit of your question. I may have strayed of track there. Can you repeat that again Kevin?

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Kevin: And I suppose **Brian** that leads us to the next issue and that's the learning community you know the concept of developing in a classroom an active learning community where people are taking responsibility for their own learning and supporting one another and sort of developing expertise as a group

Brian: I Em, I have, I don't know in the sense that I tended to work on my own with this em. I imagine that they formed clusters and book study rooms to go over problems I suspect that would have happened because it happened in other subjects. It certainly happened in mine so I would not be one bit surprised if that happened informally, that informal groups got together to help each other out and explain things to each other. Personally a few of them approached me when we started doing basic probability. Caroline and others and eh who else, somebody else, Caitlin they hadn't really so I just basically went through kind of permutations, the very very basic material to give them a feel and I think once they knew. Ye see, somebody in their forties who hadn't done maths since leaving cert or might have (16:15) done a little bit of quantitative methods in college at the age of 18 or 19, that's a long long time to be away from it. The subject appears very intimidating so some of them came. I was literally really half a step ahead of them at that stage but the perceived me to be a lecturer as distinct from a class mate. I mean I am good at explaining thinks like you are. So that reassured a few, a very few of them, but I have no doubt though to extrapolate that experience that the students themselves formed their own clusters and I'm sure, I've no doubt that you would have seen groups of them around a laptop working on a problem, I've no doubt at all that that happened. I haven't seen it but I have no doubt that it happened given my experience with...

Comment [K16]: PP - Brian feels informal study groups evolved in the class

Kevin: Ye I did and I did see them sort of looking towards you at times.

Brian: Yes, ye

Kevin: To me looking in, you know because the level because the lecturer, there has to be a bit of separation there

Brian: Oh there has, there has to be absolutely

Kevin: It did seem to me that a number of people, that clustering concept alright, it hit me, it did seem like you got sort of these little groups and within the class

Kevin: How about the environment, did you find a bit of clutter? Was there any frustration? Did you experience any frustration on Moodle?

Brian: Em... one time something was supposed to be up and I couldn't access it, there might have been one time Kevin, but I mean given, you know, the nature of our work here and I mean I kind of have to be half colleague and half student at this time em, very little, I would say negligible, negligible but you could always, it's all bandwidth at home. I could come up to my pc and access it there was never an issue with it.

Kevin: Did you feel at any stage that the learners or students in the class would have, could have been supported with a bit of training in the use of Moodle or discussion forums or anything?

Brian: I don't know, I mean they are quite; they are quite a literate bunch, even our foreign students, I mean they are well versed in IT. I don't know what their experience of blended learning or online learning is but they would be every bit as home with computers as someone like me. They would be, I mean they have grown up with them. For me its relative late in life I've... I understand them...so I think, ye the other students, I don't think I certainly think I mean, they, they should have been able to engage with it every bit as much as I did. I engaged with it completely, they are more...I would believe that the class were every bit at least as computer literate as I

Kevin: What was the biggest obstacle to you in accessing Moodle or spending time online?

Brian: There were no obstacles, I don't remember any obstacles. There might have been one occasion when I was looking for material and it wasn't up. But that might have been a delay or something may have intervened or indeed as we know an (?????) at the college. So really Kevin, I'd have to say that wasn't an issue.

Comment [K11]: G- Brian had no obstacles in accessing Moodle or spending time online; 'There were no obstacles, I don't remember any obstacles'

Kevin: So **Brian**, I'll just move on to the next item and that's the concept of active leadership...you know the perception that there is active and evident and accessible leadership for the duration of the module...and of course I'm talking about the module leader or the tutor. How did you feel there?

Brian: I felt very comfortable; I think you were very accessible. You were perceived by the young people in the class as being very accessible very fair, giving very good advice and it was obvious to them that you took an interest in them and their welfare. That was very much appreciated.

Comment [K12]: PP - Brian perceived accessible leadership: 'I felt very comfortable; I think you were very accessible. You were perceived by the young people in the class as being very accessible very fair, giving very good advice and it was obvious to them that you took an interest in them and their welfare. That was very much appreciated'

Kevin: How important do you think that is **Brian**

Brian: I think that it is very important and I think it is particularly important for foreign students who because of language difficulties might find the environment a little bit hostile...they tend to cluster together and find it difficult to make friends...so I thought that was very important for a good number of people in the class, five or six people in the class. Maybe a third, you know who are foreign nationals and eh I thought the leadership given and the care that the tutor had for the class, I thought that was remarkable and very much appreciated.

Comment [K13]: PP - Active leadership: 'eh I thought the leadership given and the care that the tutor had for the class. I thought that was remarkable and very much appreciated'

Kevin: Do you think it would have had a motivational impact? (14.00)

Brian: Well as a mature student and at my age I wanted to feel comfortable with the subject matter, but yes, I had, I felt comfortable with it, I had a good feel for it, it kinda met my expectations of what it would be, it was the first I'd ever done in my life, like the blended learning mode and certainly met my expectations. I didn't at all feel uncomfortable with it and once you had the Internet you could work on it at home.

Comment [K1]: G – Blended learning met Brianns' expectations – he was comfortable with it; 'like the blended learning mode and certainly met my expectations. I didn't at all feel uncomfortable with it and once you had the Internet you could work on it at home'

Kevin: Ye, ye, and I felt that you as a mature student seemed to have some insecurities

Brian: I had yes, I suppose I was ye, I was a little bit at my age I didn't think I'd have the energy for it, I suppose like yourself I had a very heavy teaching load...and I wanted to do well in it. At my stage in my career it is for self actualisation that I am do this, for myself, it has no career implications which is probably the best way (with a grin)...I put myself under pressure, but eh no, I settled into it after a while, certainly have enjoyed it and done well in it.

Kevin: Ye, how did you feel about the blended mode

Brian: The blended mode was very interesting because eh, you could take time to work on problems on your own and I mean eh, it was individual work, and the other thing to eh, not alone were you getting the correct solutions but you were also seeing the way other people were thinking and I found that...probably mentally my acuity would not be as strong as that of, we will say 20 somethings, I found I was well able for it, which in itself was reassuring

Comment [K2]: GP - Brian had positive experience with blended learning

Comment [K3]: PP – Brian sees advantage in Discussion Forum – 'getting the correct solutions and seeing how others were thinking' – useful as Brian felt his mental acuity would not be as strong as younger learners; 'not alone were you getting the correct solutions but you were also seeing the way other people were thinking'

Kevin: Ye, ye, you seemed to bring a maturity to it

Brian: Well I hope so, certainly, I certainly enjoyed it, it was a very innovative way of delivering the course and I certainly think I learned a lot, particularly the concepts and I found them in the statistics, I'd have done maths at school, integral, differential calculus, never understood what they meant it was very axiomatic fitting formula but at least with the statistics...the podcast on the normal distribution, it was very good so, eh, it was innovative, it was very good, it was, so it was it was a good module

Comment [K4]: G – Brian thought the module was delivered in an innovative way and felt he learnt a lot; 'it was a very innovative way of delivering the course and I certainly think I learned a lot

Kevin: And with regard to the learning objectives **Brian**, were you comfortable that, number one you understood them and were they any way daunting to you

Brian: They were daunting, yes they were and I suppose in fact for exam purposes I had to form some sort of selection, I did seem to have a mental block with the eh binomial distribution, I wasn't quite sure what it was, but with several of the topics I felt particularly at home with them, there were a few of them, I said I'd play the exams game and I'd concentrate on ones that I felt happy with. Because...I mean there was a learning outcome and there was an exam to pass, for that reason yes

Comment [K5]: PP Brian seems to have understood the learning objectives – he found them daunting

Kevin: And you have time management issues

Brian: There were time management issues as well, family, work of course and eh you know study

Kevin: You seem to be quite comfortable that the learning objectives were reasonably clear

Appendix K: Post Interview Impressions, Transcripts, Interviewee Voice and Data Coding

Introduction

Data analysis was conducted in four phases; the '*post interview impression phase*', which was conducted immediately after each interview, the '*interview transcript and coding phase*', the '*capturing the interviewee voice phase*' and the '*comment to theme phase*'. The post interview impressions are presented prior to each transcript. The interviewee voice is recorded as comments added to each transcript. The output from the latter is presented as comments added to the transcripts. These comments constitute the input for the '*comment to theme phase*' which provides the basis for the discussion on the findings.

Brian: Post Interview Impressions and Interview Transcript

Post Interview Impressions

Brian is a lecturer at the GMIT. He is in his late 50's but full of gusto and enthusiasm. Both **Brian** and I were a little apprehensive as we are colleagues in addition to being tutor and learner, and I felt **Brian**, because of his high sensitivity to the feelings of others, may find it difficult to be critical. However, I did reiterate the need for honesty as nothing short of it would serve me or the research. It quickly became clear that the module lived up to his expectations. **Brian** had been very apprehensive about undertaking his dissertation and I was aware that his fellow learners saw him more as a lecturer than a fellow student so this perhaps added a little more pressure to him. **Brian** is a lifelong learner, loves the business and marketing fields and really wants to do well.

With reference to this module, **Brian** felt the learning objectives were well structured and the marking scheme very clear. He seemed to very much appreciate (in particular for other learners) the accessibility of the tutor. He seemed to think that feedback (individual and general) was built into the module and that learners would have needed to be asleep not to get adequate. He also seemed to feel that participating learners could gauge their own progress through the module.

Interview Transcript and Coding

Kevin

I just want to thank you; I really, really appreciate this

Brian: Glad to help out.

Kevin: I'll just go through a few factors or a few of the eh considerations regarding your experience while undertaking the module and I suppose the first thing I would like to ask you is, at the outset of the module did you feel that you got a reasonable overview of the module did it facilitate you in monitoring your progress through

Brian: Yes, yes I believe I did yes

Kevin: How important was that for your experience do you think

Kevin

Were you happy that you got there eventually?

Brian: Oh I was yes, absolutely, yes, I was indeed

Kevin: Now, **Brian**, the assessment scheme...there is two things I really want to know about it, number one if you felt you were made reasonably aware of how you were going to be assessed, and number two about the fairness of it. If we take those one at a time

Brian: Well first of all you gave very clear, I mean for the research proposal, I mean, you did give a very clear marking scheme to the class. It was up on Moodle and you also gave us that so it was actually crystal clear for anyone who was engaging at all with the programme, how that was going to be done and certainly with regard to the exam component, that's the probability...that was very clear as well, perhaps what wasn't clear was perhaps would there be a weighting in it for the application to management, finding the correct solution but perhaps what wasn't so clear was what implications would be for managers, now I thought maybe that could have been developed more in the class for learners. I saw that but that was as a mature student. That's why the subject made sense to me, however, if my son Ian who is 22 was doing that course, he has a 2.1 business degree he mightn't quire see it that was so I don't know Kevin for me it worked fine. For me it worked fine

Comment [K8]: PP - Brian felt the assessment scheme was very clear. However, the external examiner recommended more focus on the management implications of the results of the statistic test - this may have not been clear to the class; 'Well first of all you gave very clear, I mean for the research proposal, I mean, you did give a very clear marking scheme to the class'

Kevin: No but I can actually see that because the external examiner intervened and wanted more focus on the management interpretations so...that makes absolute sense that you would say that so that is good to know for coming years

Brian: You did say that so

Kevin: So that's one element of it - the communications and the second element of it, did you think it was fair?

Brian: Oh yes, I thought it was very fair, absolutely it was fair. It was fair ye, students would have a good idea of what types of questions were coming up that's in the exam component. In the continuous assessment component the research proposal, I mean there was access to supervisors before the final research proposals were put in. I think the college, the mechanisms swung in very well to favour student and particularly I mean the fact that we had foreign learners in the class I would say that the institute was actually most fair with learners. I mean I am speaking as an educationalist myself...I would say yes to that question.

Comment [K9]: PP - Brian felt the assessment scheme was fair; 'Oh yes, I thought it was very fair, absolutely it was fair'

Kevin: Now the online environment, I'm talking about when you went on to Moodle, how did you find it?

Brian: I found it..., I found Moodle very good, I use Moodle myself with the marketing, it's mostly information. I download slides for the students to give them a structure to the course, but of itself it's not sufficient eh, In your particular case, I mean you put up worked examples, particularly coming up to the exam I found it very good for revision purposes accessibility, once you had a good computer...you know you were online, there were no snags, certainly I haven't ever come across a time when I just couldn't access material I wanted to access at a given time I found it good I found access to it good and I found the content very good too and very relevant and easy to and easy to understand

Comment [K10]: G - Brian felt he had easy access to the information he wanted on Moodle and he found the content 'good', 'clear' 'relevant' and 'easy to understand'; 'haven't ever come across a time when I just couldn't access material'

Brian: Oh yes, oh yes, yeah. They were do-able, yes, absolutely. The learning objectives were clear, I mean there were a structure to it you know, the material was put up on Moodle and I would say that the only thing is that the lecturer, that's you yourself Kevin, that you probably didn't have sufficient time to do it in the depth that you would have liked to have done it in, you didn't have time, but that's a, that's nothing to do with you or me as such, that's an organisational bit, that has implications for the institute, I think so, ye

Comment [K6]: PP - Brian feels the learning objectives were clear; 'The learning objectives were clear, I mean there were a structure to it you know, the material was put up on Moodle'

Kevin: And **Brian**, the individual learning tasks, now people have difficulty with the concept of individual learning tasks, what I suppose, concepts such as the process of doing some of these tests, I'm just wondering if, how you felt about the instructions you got, the clarity of the instructions you got on achieving individual learning tasks

Brian: Are we talking about...well I didn't really understand it, I felt it would probably involve too much time, now maybe it's not that difficult at all but I felt that probably for the sake of time management I played the student game and I actually worked at subjects, worked at topics that I felt I understood well and I could delve into them a little bit more...I felt that I struggled with some of them at first but what I did then was I did my own worked examples, I changed parameters, I changed values and I'd actually work out my own and once I felt comfortable with them then I was able to, I did pretty well in the...

Comment [K7]: PP - Brian found instructions on the learning tasks (statistics) difficult at first but became comfortable with them

Kevin: It seems **Brian**, you, your sort of strategy was to take some elements of it and to master them

Brian: I would say to take most elements of it and master them but not all elements, there were some of them that I didn't eh, particularly as I said the binomial distribution, to this day I still don't understand it fully but the normal distribution... data display and Baye's theorem etc, I was comfortable with those I also felt that, you know, I was more interested in bringing in their management implications rather than just pure maths, you know what would this mean to me as a manager and because I engaged in it in that manner I found it very interesting and it would be useful for managers not whether a 22 year old sees that Kevin I don't know.

Kevin: Ye quiet often actually you know I suppose people...

Brian: Now if I could just continue with the research methodology lectures, you know I really struggled with getting you know kind of primary objectives and secondary objectives right there in that. I was probably looking too deeply into that part of the course when in fact when it's done and passed etc it's straight forward, my problem is that I had never done a research dissertation, I had done a lot of project work, yes, but I had never done anything like that before, for the very simple reason I have a Masters but its 30 years old and it was done by exam and oral, that was it.

Kevin: I think the tendency **Brian** which I have seen now, I don't have a huge experience teaching research methodology but just to see could you associate with the concept that students want to achieve everything with regard to setting objectives and it seems very difficult to get them to focus on a simple clear and precise...objective

Brian: I have discovered that it is also a work in progress for several weeks and may, you know involve fine tuning over a period of time to get it just right, that there is nothing set in stone from day one, not at all, I've leant that, I didn't know that before embarking on that module.

course there was a different one in statistics. The research methodology I suppose first, how did you feel about that?

Hesham: Actually I remember you taught us about the assessment scheme. It was clear for first half of the Moodle (research methodology element) so you clarified it early which made us to feel fine. My own self actually I felt fine you mentioned it early stages

Comment [K28]: PP - Hesham felt the assessment scheme was clear and fair; 'It was clear for first half of the Moodle (research methodology element) so you clarified it early which made us to feel fine. My own self actually I felt fine you mentioned it early stages'

Kevin: Did you feel the research methodology scheme was fair, that it was fair to grade you on your research proposals?

Hesham: Ye, but I think the research methodology deserved something more than 50, (Do you?) I do, concentrate more on making the research itself.

Kevin: What would you think it should be worth? 60, 70

Hesham: Ok, at a minimum 60, at a maximum 70 because the statistics is still important but as you know the SPSS now is like making the thing easier but still you should have a ground about the statistics about the fundamentals of statistics for the research

Kevin: So you feel the statistics element is an important element of the course, do you?

Hesham: It is important yes still, very important

Kevin: And with regard to the assessment for statistics did you feel that was fair?

Hesham: Ye

Comment [K29]: PP - Hesham felt the assessment scheme in statistics was fair

Kevin: Because there was a little bit of a change in assessment if you remember there was a little more focus put on your understanding of things more so than the process

Hesham: Ye analysis

Kevin: Ye, a little more on analysis...did you feel that was fair Hesham

Hesham: Ye, I think very important, analysis very important, even if you would use the SPSS it is still important to understand the thing from your perception...

Kevin: Ye, Ye, I see where you are coming from, it is vital to, and probably as we get more and more software and the tasks are done automatically, we need to spend more time engaging with the meaning behind it.

Hesham: Ye, Ye

Kevin: With regard to the online environment when you logged on to Moodle, did you find it a little cluttered, difficult to find what you wanted to find, you know for example with the discussion forums. I was a little concerned about that myself...it might have been a little cluttered or whatever. How did you feel about it?

Hesham: Actually there was like a barrier for starting then it became easier so something easy actually, forums for the... but still...students in general they felt it there is like a barrier em for starting so like the just care from starting, from start using this...module so eh, if you ask me what I suggest I think if you ask me I if you ask me give few marks little

Comment [K30]: G - Hesham found Moodle difficult at first but it became much easier

Hesham: Post Interview Impressions and Interview Transcript

Post Interview Impressions

I spent a lot of time rephrasing questions for Hesham as he obviously had difficulties in understanding the concepts I was exploring. Many of Hesham's responses were 'Yes' 'No'. Overall Hesham was satisfied with module delivery and relates a positive experience

Interview Transcript and Coding

Kevin: I am just going to ask you a few bits and pieces with regard to the research methodology element and first thing. From a personal perspective did you feel that when you commenced the module that you got enough detail to sort of monitor your own progress through it? – it's a little bit difficult now that question

Hesham: Em, actually I do, the conclusion after the Moodle, the conclusion after facing the Moodle, I feel 'twas clear you were close to us and you were empowering us so I feel even the system itself, the Moodle it was useful so I think so yes, I agree.

Kevin: And with regard to the clear and precise learning objectives did you feel they were set out reasonable well for you? You know, what you needed to learn during the module – were they clear in your mind?

Hesham: Ye,

Kevin: Ok ye, that's appreciated.

Kevin: Now with regard to communicating instructions on achieving the learning tasks, and I think in particular in the...with the statistics element, you know for example there were some videos, podcasts up there to help you. Did you feel you got sufficient instructions on achieving those tasks, the learning tasks. Did you make much use out of the video podcasts? Did you find them useful?

Hesham: Ye, ye actually ye. Many of these videos were produced by a nice projection em and it was like em easy to be repeated em it was produced eh eh with good drawing and clear drawing and if any point is not clear it is easy just to go back a few seconds to repeat it again so eh my view I think it was useful, really useful and actually I advise to use it with many subjects not just research methodology could be useful for any other subject.

Kevin: Ye, ye, it's a sort of another connection for you, isn't it? With the learning materials

Hesham: Ye, ye

Kevin: The next item that I just want to discuss with you is the assessment scheme, and I mean I set out to try and ensure that when you got your marks or grade, you would understand from the assessment scheme why you got the grade you got and that it was important for students to feel it was fair for motivational purposes. How did you feel about the assessment scheme? We had two of them, one in research methodology and then of

Comment [K24]: PP - Hesham had sufficient overview to monitor progress through the module; 'I feel 'twas clear you were close to us and you were empowering us so I feel even the system itself, the Moodle it was useful so I think so yes, I agree'

Comment [K25]: PP - Hesham felt the learning objectives were clear

Comment [K26]: PP - Value of Video could be viewed repeatedly (Hesham)

Comment [K27]: PP - Hesham felt the podcasts were very useful for instructions on achieving the learning tasks; 'I think it was useful, really useful and actually I advise to use it with many subjects not just research methodology could be useful for any other subject'

Hesham: Em actually ye, there were a few times I felt...it's like if you find people making large circle, they don't want you to access the circle, so it's having some....

Comment [K34]: PN - Hesham had difficulties engaging with circle (work group) - felt like outsider; 'it's like if you find people making large circle, they don't want you to access the circle'

Kevin: And I wanted to ask you also about feedback, you know there was feedback in this module, and again I'm back to the research methodology module. There was general feedback for the class and then there was personal feedback. First of all I'll ask you about the general feedback. How important was that to you and was it adequate?

Hesham: The general feedback

Kevin: the general feedback to the class

Hesham: Eh, actually it was, I submitted it late so there were no replies. No feedback

Kevin: Oh, you didn't get audio feedback

Hesham: Ye - no the general feedback you mean for the class

Kevin: Ye, ye

Hesham: Through Moodle, there was no feedback for my copy, my research, eh. Through the presentation which we made, which I made with our colleagues to our... (presentation of research proposal in board room to peers and supervisors) there were eh good replies it helped me to help my research proposal and the research idea. I've got your replies through the Moodle, (Kevin: with the audio feedback) ye with the audio feedback em, it was useful, em, and important, but you know what, the mistakes I made were because I thought it like draft so I can do the things later but still it's better just to upload it and think this is eh the final proposal which will make the reply, your reply more valuable for me because for me it will help me more cause it will just fill the cracks.

Comment [K35]: PP - Hesham was happy with feedback and found the audio feedback useful

Kevin: And overall, Hesham, if we were to go back in time a little bit, knowing what you know now, and you were coming in to my office here to tell me how I might make your experience better, what advice would you give me?

Hesham: em, actually, if I learnt one information from you I would say thanks a lot, but... because I've learnt lots of things it's hard to know how I should appreciate you or how can I appreciate you, but in general it was useful, really really useful. Em, and as I told you, its useful because 'till now I am going back to this information. Actually my wife has a PhD and she, she is excellent at new research things and she came just for few weeks here to Ireland. We were discussing about this Moodle and especially the research methodology so she liked it.

Comment [K36]: G - 'if I learnt one information from you I would say thanks a lot, but... because I've learnt lots of things it's hard to know how I should appreciate you or how can I appreciate you, but in general it was useful, really really useful'

Kevin: I'm glad to hear that.

Hesham is thanked and interview concluded.

Maeve: Post Interview Impressions and Interview Transcript

Post Interview Impressions

like 5 marks for each student but one topic eh and for replies so it will be 5 marks so then he will just break this barrier.

Comment [K31]: F – give marks for engaging with Moodle (Hesham)

Kevin: So the barrier, you would see the barriers because there is no marks going for it

Hesham: Cause it is hard to feel it is useful. I start using the, using it I thought it difficult, I could make mistakes I could eh so there were like eh (Kevin, learning curve) ye but you know I'm advancing for marks because I think it is really useful. I was studying most of my studies for the exam was from the system, from the Moodle, so I think it's important and the students need to break this barrier as fast as possible

Kevin: That's a good point actually. Did you feel afterwards, you know when it was all over, did you feel it was of any benefit to you? (7.32)

Hesham: Ye, ye and I'm daily going back to this Moodle the research methodology

Comment [K32]: G – Hesham found Moodle useful beyond the duration of the module

Kevin: Are you?

Hesham: Ye,

Kevin: Good so it seems to have a value beyond the duration of the module. (7.47)

Hesham: Ye, because you know what, now less stress for the subject so eh now I have no stress so whenever I back to the eh old subject I feel it easy to understand and get the best from it.

Kevin, Ye, ye, very good. I also wanted to ask you about the overall class environment, you know if you felt you were one of a community. A| broader community of learners in the class or did you feel more on your own, isolated as a learner. Just to get your opinion on that.

Hesham: [Ye, ye actually it depends, I'm not sure whether it's always you know It's like feeling sometimes...you feel like you want to be yourself to understand it or to engage with the information. Sometimes you need to contact your friends to make... meeting or brainstorming or asking your friends so I assume that em in general that it was very good. Ye, you are making lots of good mixing. Actually I think it's not that hard, you know what, the problem most of the statistics subject and topics I have studied it before, but I think you know it's like em, that (rejectal) feeling you will feel its hard because your friends it's hard so sometimes you need to be your own self so I will just break this barrier so sometimes you are behind your friends so you need to engage your friends so they will just let you feel easy.

Comment [K33]: F – Hesham worked alone when he needed and with friends when he needed

Kevin: As long as you felt you could when you needed to

Hesham: ye, ye

Kevin: That's important because eh, because there has to be huge levels of difficulties for you coming from a different culture number one, a different language number 2, the environment you are in is probably different the learning environment at home. Did, can I ask you did you have sort of any major emotional difficulties, throughout this, you know throughout the whole of the course or the module that you could have been supported or helped better with? (10:32)

Kevin: Did you, and the overall instructions on achieving tasks, like the tasks in statistics.

Maeve: I can't remember which one it was but I remember I had to look up more information online because I couldn't understand exactly how to achieve, find the answer. Other than that the learning tasks were fine.

Kevin: How did you find the Audio feedback?

Maeve: Oh ye that was different

Comment [KMH40]: PP- Maeve suggests that there is a novel value in audio feedback

Kevin: I know it wasn't very detailed. Did you find it any way useful?

Maeve: Oh ye I did. I found it useful ye. I had to listen to it a few times but it was very good

Comment [K41]: P - Suggests how learners used audio feedback. Maeve had to listen to the audio feedback several times but found it very useful

Kevin: Maybe a new way forward. Eh, the assessment scheme and with regard to you feeling that the assessment scheme, that you understood it and that it was fair. If you remember, there was a specific assessment scheme for the research methodology and there were model answers for the statistics.. Obviously you would not have had access to those. So I would be talking primarily about the research methodology. Did you feel the assessment scheme was fair? And did you understand how you were going to be assessed on that research proposal?

Maeve: On the breakdown of it. Ye, I understood it ye but when I was doing it at the time I didn't really think about how it would be broken down and what I would be marked on. I just wanted to get good mark in the presentation overall. Now it was broken down fairly so everyone knew what they should be doing.

Comment [K42]: PP - Maeve understood the assessment scheme and felt it was fair

Kevin: Was it time pressure, probably, stopped you engaging with that?

Maeve: No, I don't think so. We had plenty of time with it.

Kevin: oh with that itself, but you would have had substantial time pressure with other modules

Maeve: Oh Ye, ye

Kevin: But in general you feel you were happy with it

Maeve: Ye

Kevin: Can I ask you now about the online environment, in Moodle itself, when you logged on to Moodle. Did you find it cluttered? Did you find it easy to follow? What were your general feelings on it?

Maeve: Em, well like you said, you found it a bit daunting at first when you opened it. There was so much to read but it was out pretty neat enough. I mean easy to follow. So, I liked Moodle, I think it is a good way of learning

Comment [K43]: G - Maeve found Moodle neat enough and easy to follow; 'There was so much to read but it was out pretty neat enough. I mean easy to follow. So, I liked Moodle, I think it is a good way of learning'

Kevin: Ye, why would you...?

The interview with Maeve was short and snappy. Her impressions were clear cut and she did not need to elaborate. Her levels of satisfaction with the module were reasonably high even though she did not see the relevance of the module at the outset; the connection between research methodology and statistics to the research dissertation. She is an independent learner and had very little interaction with me during the course of the module, however, she did engage substantially with class groups, and hinted at a 'social constructivist' approach to learning. I felt I stumbled a little during this interview in particular the question on 'instructions on achieving learning tasks'. This question seems like as if it is not really meaningful to learners.

Interview Transcript and Coding

Kevin: Thank you very much for coming....the first thing I was going to ask you about was eh, if you remember the kickoff of the module...did you feel that you got a reasonably good module overview. You know one that would allow you gauge your progress as you were getting through your module.

Maeve: your module was it

Kevin Ye, my module, I am talking about the induction session

Maeve: Oh ye, there was a lot of information available on Moodle, online. It was very detailed and everything, so we knew exactly what we were getting into. When you went on the page at first, because you had so many documents up it just seemed that there was so much we had to learn but they were just readings so it was fine, ye.

Comment [K37]: PP - Maeve felt the class were provided with a clear module overview; 'Oh ye, there was a lot of information available on Moodle, online. It was very detailed and everything, so we knew exactly what we were getting into.'

Kevin: Did you find it a bit daunting?

Ye, at the start because I took a year out, from college. So going back into it

Kevin: Ye, ye, did you find it more difficult getting back into it?

Maeve: Ye, absolutely getting back into college after my primary degree

Kevin: Did you do a bit of travelling or something

Maeve: No I just worked, I tried for a scholarship from Udaras but I didn't get it

Kevin: Well I suppose it was a good time to come back to college...what I was a going to ask you about secondly is the learning objectives and with regard to the topics in the module, how you felt about the learning objectives, if you felt they were clear and precise enough for you to follow?

Maeve: Em, ye they were, the statistics there could have maybe been some more examples of them I suppose, they were fine, ye. I understood them perfectly

Comment [K38]: PP - Maeve felt the learning objectives were fine (but would have liked more examples in statistics)

These were plentiful in course text which in general learners did not acquire, thus this will be ignored as a future implementation driver

Kevin: Ye, eh, and I am going to ask you about the learning tasks. Now in research methodology itself, the learning tasks were not really relevant. You know with regard to you getting instructions on achieving them – the learning tasks. In statistics they were more relevant you know because you need to learn the process and you know for example there were some podcasts, videos up on that. How did you feel about the ones in statistics? Did you feel that they were communicated sufficiently? Could they have been improved upon?

Maeve: The podcasts? I thought they were very useful

Comment [K39]: PP - Maeve found the podcasts very useful; 'I thought they were very useful'

feedback to individuals. What I mean by feedback to individuals is the like of the audio feedback – feedback on eh your research proposal as it was developing. So first of all general feedback to the class - did you feel that there was adequate general feedback to the class as the module progressed?

Maeve: Em, I cannot even remember the general feedback so maybe it was'nt, maybe it could be developed upon a little more I know the individual one, the emails and text messages, they were very good.

Comment [KMH50]: F - Class progression schedule with learning objectives that should be achieved (Maeve)

Kevin: Did you feel you got adequate feedback on your proposal when it was developing

Comment [KMH51]: F - Text messaging appreciated – is it time that Web texting was embedded in Moodle? (Maeve)

Maeve: Ye, definitely

Comment [K52]: PP - Maeve definitely got adequate personal feedback

Kevin: Well that's it generally Maeve. Just one more question. Your overall experience of the research methodology and statistics - was it positive?. Was it in the middle? Was it negative? Did it engender anything remarkable in you that you think would be important?

Maeve: Well it was not a subject I thought would have been necessary for the thesis. At the start I was kind of wondering why are we doing this? I don't see the relevance but then towards the end I saw the relevance in it and how it would help our thesis progress and be better and the statistics and all that. Ye, I think it was very positive.

Comment [K53]: G - Overall Maeve had a positive experience; 'Ye, I think it was very positive'

Kevin: That's an interesting concept actually that you did not see the connection between that and the thesis. Did you do an undergrad dissertation?

Maeve: No

Kevin: Did that realization take long to come through, that...

Maeve: It took me a while, ye. I don't know if it took the rest of them.

Maeve is thanked and the interview terminated.

Olive: Post Interview Impressions and Interview Transcript

Post Interview Impressions

Olive is from Poland, however, she has a good working knowledge of the English language. She is a very confident learner who thinks fast and answers fast, factually and to the point. She is an independent learner, espousing social constructivism when it offers advantages to her. While her answers tended to be yes, or no, she expanded she discussed discussion forums and audio feedback at a deeper level. She particularly likes forums for their efficiency and effectiveness in getting questions answered promptly and audio feedback for the personalisation it offers. Overall Olive's learning experience was positive while undertaking the module.

From a skills perspective, this interview did once again highlight the importance of the 'reflexive element of this research'. The lack of expansion on issues from Olive encouraged me to explore a little deeper. This paid dividends on two fronts; it reinforced the importance of social constructivism i.e. through the use of forums and the value in rich

Maeve: You are able to access your notes before you go into lecture so your able to read them, your not going into a lecture not knowing what something is about. You might be able to prepare questions before you go in.

Comment [K44]: G – This is why Maeve liked Moodle – access notes before class and prepare questions; 'You are able to access your notes before you go into lecture so your able to read them, your not going into a lecture not knowing what something is about. You might be able to prepare questions before you go in'

Kevin: Ye, now there's another concept that I want to ask you about and that's the concept of active leadership If you felt during the module you know that you had access to me basically. If you had and difficulties or any problems did you feel that somebody was keeping an eye on the course and sort of bringing it along?

Maeve: Ye, well you always made sure that if we needed anything to let you know. I just, I never really take advantage of that from the lecturers. I was doing some ...and maybe at the end of it if I have some questions I don't like pestering people by asking them all the time about things. But you made yourself available to everybody.

Comment [KMH45]: G Shows span of learner approaches (Maeve)

Comment [K46]: PP – Maeve – a felt I was available to everybody – she never took advantage; 'Ye, well you always made sure that if we needed anything to let you know'

Kevin: So would you search out answers yourself before you go to the lect..., before you approach the lecturer, so you probably describe yourself as an independent learner would you?

Maeve: Ye, ye

Kevin: What about other students. Did you have sort of any group work going with other students where ye studied together or you know did ye. Would you have been involved in a community of learners?

Maeve: I work better in groups I think...when I have a question I don't like annoying people and asking the... and making them feel like they have to help me along. That's why in a group it's ok cause I can throw all of my questions and ideas. Whereas if I am by myself I feel like I have to go looking for the answers.

Comment [K47]: PP – Maeve works better in a group and found groups 'useful'

Kevin: Did you find that very useful?

Maeve: Ye

Kevin: Eh, now that actually leads me on to the next question and that is the concept of an active learning community. You know you can have a class sort of of sole learners or you can have a classes where people tend to sort of segregate and break up into groups, study groups. Where you get the sort of community of learners. Did you feel that there was that in the class in general? Not just your experience but the class in general

Maeve: As in did the whole class interact with one another...Ye, ye there was a lot of different opinions obviously but that's the only way of learning really, everyone having a different opinion and being to sort out what you think. Ye, ye, the class was fine

Comment [KMH48]: PP – Maeve instinctively subscribes to social constructivism 'Ye, ye there was a lot of different opinions obviously but that's the only way of learning really, everyone having a different opinion and being to sort out what you think'

Kevin: Ye, that's an interesting concept. That's the concept of social learning where members of the class would sort of negotiate a common meaning for different concepts. So you felt there was a substantial element of that I the class.

Maeve: Ye

Comment [KMH49]: PP – Maeve felt there was a substantial element of social constructivism in the class

Kevin: That's interesting. I've already asked you about the podcasts but I'm going to ask you about now is the provision of feedback and I'm talking about a feedback at two different levels. There was the general feedback to the class, sort of major issues and then

Kevin: And did you think it was reasonable fair

Olive: Ye

Comment [K59]: PP - Olive feels it was important to understand the assessment scheme and that it was fair.

Kevin: The next thing I am going to ask you about is the online environment. When you logged on to Moodle, how did you find it? Did you find it cluttered, easy to use?

Olive: Easy

Kevin: Did you? Would you make any recommendations for improving

Olive: No, I think it...overall e-learning worked very good and all the forums and everything it was clear and you could find everything on it so it was really good. I can't really give any bad feedback on it.

Comment [K60]: G - Olive found Moodle clear and information easy to find; 'No, I think it...overall e-learning worked very good and all the forums and everything it was clear and you could find everything on it so it was really good. I can't really give any bad feedback on it'

Kevin: What kind of a learned do you think you are Olive, would you be a lone learner or a group learner. How do you learn best.

Olive: I think lone...it depends, it depends on the subject so if I won't understand it is worth to work with a group, someone can explain ...I would say if it's like statistics or mathematics cause I really like my....so I rather work alone on that cause I know myself... I don't have to explain to myself.

Comment [KMH61]: P - Social constructivism; 'so if I won't understand it is worth to work with a group, someone can explain' (Olive)

Kevin: The next question I am going to ask you is, I suppose really is about me and about active leadership throughout that module. Did you feel confident that there was somebody overseeing the module and in particular somebody, would you have been comfortable making contact if you had problems or questions to ask

Olive: Ye, ye, - it was important to

Comment [K62]: PP - Olive felt comfortable approaching tutor

Kevin: How important was that to you

Olive: Very

Comment [K63]: G - Tutor approachability is important to Olive

Kevin: Ye, that's the concept of providing active leadership during module delivery. Would you have felt comfortable approaching me with a problem

Olive: Ye, definitely

Comment [K64]: PP - Olive would have felt comfortable approaching me with a problem.

Kevin: Now the next question I am going to ask you about is an active learning community. This concept of the class and the tutor being sort of learning together as a community of learners, eh you know where you might get groups formed around different problems. How prominent did you feel that was in the class? Did the class constitute, in your opinion, an active learning community as such? Where students gelled with one another? Were you, yourself involved in a study group?

Olive: Ye, ye, I was, I was. The forums were good

Comment [K65]: PP - Olive felt the class constituted an active learning community - she obviously felt the discussion forums were important to this

Kevin: Oh the forums, did you use...?

Olive: Ye I did

communications by way of the audio feedback which Olive seemed to find innovative and motivating.

Interview Transcript and Coding

Kevin: Now the first thing I want to ask you about, if you can think back to the induction session and eh, what I would like to know is how well did that induction session prepare you for the module which was in front of you. Did you feel you got a good overview?

Olive: Ye, I think it was overall good...

Comment [K54]: PP - Olive feels she got a good overview of the module: 'Ye, I think it was overall good...'

Kevin: How early did you see the connection between the research methodology any your thesis. Did you see the relevance of that.

Olive: Ye I see it very early actually, very early

Kevin: Now, with regard to the individual topics, how well did you feel the learning objectives were communicated to you?

Olive: Very well

Comment [K55]: PP - Olive felt the learning objectives were communicated very well [Olive]

Kevin: And eh, I was going to ask you then about the learning tasks for example, how useful did you find the podcasts with regard to achieving the tasks in statistics? If you remember the video, the podcasts - did you use those?

Olive: I did, I did. I think they were very good ye.

Comment [K56]: PP - Olive found the podcasts very good; 'I did, I did. I think they were very good ye.'

Kevin: You found them useful?

Olive: I think very good, ye...they were something different as well...using videos and that kind of stuff for learning is really good. So Ye.

Kevin: How important were they to you?

Olive: Very important, they changed completely the way you learn and I think you find more knowledge using different things than books.

Comment [K57]: PP - Olive thinks you 'find more knowledge' from video; 'Very important, they changed completely the way you learn and I think you find more knowledge using different things than books'

Kevin: So you would recommend them. You seem to be highly recommending the video. I wonder how it would fit in with the research methodology...you know it's very suitable for statistics, but could you see using the podcasts with the research methodology.

Olive: I think you could, I think you could.

Kevin: I want to ask you about the assessment scheme. There were two assessment schemes, obviously, one had to do with your research proposal and the other had to do with statistics which we had model answers for. But with regard to the research proposal, did you feel you were communicated the assessment scheme...

Olive: Ye, ye, I remember.

Comment [K58]: PP - Olive was communicated an assessment scheme

Kevin: How important was it for you to understand that assessment scheme

Olive: It was very important

Kevin: Overall how would you rate your experience of the module?

Olive: Very good

Comment [K72]: GP - Olive had an overall positive experience with the module

Kevin: Very good was it? Any other comments that you would like to...

Olive: No, I was very happy with the module

Olive is thanked and the interview ended

Fred: Post Interview Impressions and Interview Transcript

Post Interview Impressions

Fred is a Chinese student and has struggled with his studies due to the language barrier. The discussion forum on Moodle and the podcasts were extremely useful to him as he said that he only understood about 40% of what was said in class and used online resources in a just in time fashion to prepare for assessment and exams. He also found texting very useful to communicate with the tutor. His overall experience with the module was satisfactory even though the overall workload meant he could not engage with Moodle as much as he would have liked. Transcription is going to be difficult, however elements relation to levels of satisfaction with the module may be divined out with more ease.

Interview Transcript and Coding

Kevin: Now the first thing I am going to ask you about the module is if you felt you got a sufficient overview, if you understood what we were going to cover and the things we were going to do?

Fred: I think it is good, of course I mean during our first class you learn me to use Moodle, all information is in Moodle and I don't know how to say...I think we can do a preparation job before, we know what we are going to learn for next class during our first class I really know what the whole class looks like

Comment [K73]: FP - Fred feels the class got a good module overview, good enough to prepare for class beforehand

Kevin: Did you feel the module was relevant to your thesis

Fred: Ye, of course this module is about statistics and research methodology. I think this is very important to see, this is for our...two important thing to see, one is for the data, and the statistics is relevant for the data another important thing is the writing, how to do the research, how to analyse this data so this is what research methodology taught us (1.37 so I think this is...lead me to)

Kevin: Ye I understand that. The learning objectives, did you und..., did you feel they were clear

Fred: Ye, of course, it is all clear

Comment [K74]: FP - Fred felt the learning objectives were clear

Kevin: Now the instructions on achieving learning tasks, like the podcasts on Moodle, did you find them useful. Learning tasks is not very relevant to research methodology but it is relevant to the statistics where you have to learn the process

Kevin: How important were the forums

Olive: Very important

Kevin: Would you be able to comment on why you felt the forums were important

Olive: I think it was just easy say for example if you weren't...actually in the college or for example in the house and you had a problem, you could just write it down. I have a problem with this or with this question and someone would actually respond to you, in an hour maybe, in a half an hour but you would get that response and you wouldn't have to actually go on the phone to someone asking and you don't actually know if they will know the answer ... I think it was very good.

Comment [KMH66]: PP - Advantage of forum over phone; can post problem as forum and get a quick response with solution (from peer) (Olive)

Kevin: How important was it to you to have the mobile number of the tutor?

Olive: It was very good, ye,

Comment [K67]: PP - Olive found it 'very good' to have the mobile number of tutor

Kevin: Now I am going to ask you about the provision of feedback. There was general feedback to the class on how well the course was progressing. How did you feel, was that adequate? Or inadequate, or how did you feel about it?

Olive: Ye

Comment [K68]: PP - Olive felt the provision of feedback was adequate

Kevin: Important?

Olive: Ye

Kevin: And what about personal feedback on your own work

Olive: I feel that was very good

Comment [K69]: PP - Olive felt personal feedback was very good

Kevin: How useful did you find the audio feedback

Olive: Very useful

Comment [K70]: PP - Olive found the audio feedback 'very useful'

Kevin: Did you use it

Olive: Ye, I did

Kevin: Would you advocate it as a tool

Olive: Ye I would...it makes it more personal like someone cares about you during work so I think it was really, really good.

Comment [KMH71]: PP - Audio feedback is richer than textual; 'it makes it more personal like someone cares about you during work so I think it was really, really good' (Olive)

Kevin: Now your thoughts are really appreciated

Kevin: I am just going to ask you now and it's not intended to probe personally, but just to know if there was any major issues for you while undertaking the module, any difficulties, any emotional issues created for you

Olive: No, I don't think so

Kevin: You found that useful for you

Fred: of course, ye but you know, but this is limited (by amount of work in last semester)...but last semester we had also a lot of work to do so maybe people don't engage with Moodle very frequently, not because of this Moodle, it's because of you know the situation last semester, we have... we just p[la]ssed from presentation to another presentation... assignment to assignment.

Kevin: So you would feel that you were too busy to really engage with Moodle and the discussion forums as much as you would have liked to

Fred: Oh ye, well we were very busy you know we have to sacrifice something.

Kevin: Ye, ye that's understandable. Now finally I am going to ask you about feedback to the class. Feedback in a general level to all the class (Fred repeats 'all the class') Ye, I, did you feel there was a reasonable amount of feedback to the class with regard to progression and things and what ye needed to do as a class

Fred: Ye, I think feedback is (?????)

Kevin: Ye when I speak to the class on what needs to be done and what needs to be covered... and how ready they might be for assessment and for exam. That is a difficult one for you to understand... (It is difficult for Fred to understand 'general feedback'). But I think you might understand personal feedback (Fred repeats 'personal feedback') Where I give feedback, not to all the class but just to you. Did you feel that you got enough personal feedback and that it was available to you when you needed it.

Fred: I was actually... you are only lecturer who, you text, you communicate with us and I think that is very convenient and we can get feedback immediately. I mean you used the text, that means it's more convenient and quicker than communicate just by email...

Kevin: So you found the text useful

Fred: Of course useful...

Kevin: I am glad to hear that, can I ask you about your own experience, your own overall experience with this module research methodology and statistics – was it good? Was it bad, did you have...you know did you have bad experience, good experience?

Fred: It's impressive, ye I think it's good.

Kevin: So were there stages where you were extremely worried, extremely frustrated?

Fred: Actually, from the first day till now (said with a little laugh). I really am frustrated. I'm worried its because of the time pressure. Well it's not because of this subject, it's because of everything. I have to take care of everything.

Kevin: And the language barrier has it been very difficult for you.

Fred: Of course

Fred is thanked and the interview is concluded.

Comment [K81]: P - This suggests the usefulness of Moodle (encouragement) for engaging with discussion forums; 'Oh ye, well we were very busy you know we have to sacrifice something' (Fred)

Comment [K82]: PP - Fred was impressed with feedback – use of text more convenient and quicker; 'I was actually... you are only lecturer who, you text, you communicate with us and I think that is very convenient and we can get feedback immediately. I mean you used the text, that means it's more convenient and quicker than communicate just by email...'

Comment [K83]: GP - Fred felt his overall experience was impressive; 'It's impressive, ye I think it's good'

Fred: Ye, that video is very very useful. Actually, because of my language barrier, I can't, maybe I can absorb about 40% of knowledge in you class but you know like, so before exam, actually just two weeks before exam I don't know how to do the questions of statistics so I just learn by myself and use the video on your Moodle and it's very detailed and it taught me how to do this questions and I think it's very useful and you see I think I be very good.

Comment [K75]: PP - Fred found video particularly useful because of language barrier; he can absorb about 40% of what is covered in class so video facilitated self learning; 'Ye, that video is very very useful. Actually, because of my language barrier, I can't, maybe I can absorb about 40% of knowledge in you class but you know like, so before exam, actually just two weeks before exam I don't know how to do the questions of statistics so I just learn by myself and use the video on your Moodle and it's very detailed and it taught me how to do this questions and I think it's very useful and you see I think I be very good'

Kevin: What about the audio feedback

Fred: Actually you give, I remember you gave us audio feedback for our, you gave us two chance for to submit our final proposal and audio feedback for first chance. But I missed that chance because for that time I am really very busy. Ling let me refer to feedback you gave to her, I think that is great. It is easier to understand, I mean easier learn, just a simple writing feedback.

Comment [K76]: PP Fred feels audio feedback was very useful - 'easier learn'

Kevin: The Assessment scheme, If you remember I showed you a scheme where I was going to mark your proposal so you knew what it was going to be marked for. Did you understand that and did you feel it was fair?

Fred: I think, understand that and that is fair, each part is marked equal.

Comment [K77]: PP - Fred feels he understood the marking scheme and that it was fair

Kevin: Can I ask you about Moodle and the online environment. How did you feel when you went on to Moodle. Did you feel it was cluttered, or there was too much on it or not enough on it?

Fred: No, I think it was clear, I mean you divide it into 10 chapter, I think, 11 chapter, I cannot remember and it's very clear. When I want to look for something I just go to each chapter (Fred distracted as I check how long interview is in progress)

Comment [K78]: GP - Fred felt Moodle was clear

Kevin: Now, active leadership, did you feel that you could approach me for anything, help or support you needed, did you feel happy or were you worried about it

Fred: I remember one time, I had no idea,... it's like, it's also research proposal... it's the first time I don't remember... it's about uh presentation, and I don't know how to make this slide and you taught me how to make the slide, I thank you.

Comment [K79]: PP - Fred felt tutor was approachable

Kevin: An active learning community, did you feel that the class worked well together, you know, did you work in groups with people, and learn together.

Fred: I think so, other students also taught me how to solve some questions, and I want to mention about the discussion forum on Moodle, I think that was very useful, you know one time I just tried to do a question about probability, and I found **Brian** and Maeve, they said, oh you be very good, and also, **Brian** is very, I don't know how to say this, **Brian** is very 'think so, other students also taught me how to solve some questions, and I want to mention about the discussion forum on Moodle, I think that was very useful, you know one time I just tried to do a question about probability eager to do all the course and we all put some comments...you know what I am saying.

Comment [K80]: PP - Fred experienced an active learning community Discussion forum on Moodle useful; 'I think so, other students also taught me how to solve some questions, and I want to mention about the discussion forum on Moodle. I think that was very useful, you know one time I just tried to do a question about probability'

Kevin: **Brian** did engage well with Moodle,

Fred: ye he did

there, you could access the material when you wanted as you wanted it and, em, you know, any questions that needed to be answered were answered, you know, I've never left the room as in any doubt as what I, what I felt I had to do, you know, and em...

Kevin: Can I ask you about the learning tasks then, you know instructions on learning tasks... it's a little bit tricky because they are not really relevant to the research methodology but with regard to the statistics the learning tasks you know, steps that you had to go through, for example in doing the specific statistical tests... did you feel reasonably comfortable with them or how did you feel?

Aishling: No I didn't, I felt the whole statistic thing, when I heard that I had to do it initially it was quite frightening (Kevin: Was it) ye, ye, very much so. But then when I actually, coming up to the exam once I actually, we didn't. Time was an issue as well, time was a huge factor, whereas the same particular module over in NUI, G is done throughout the whole, from September to May and I think it was just the time which was allocated, you know, but when I actually sat down with that subject on its own, **wow did I get into it** and I went from actually disliking it to feel probably my favourite subject out of all of them... I found it very very interesting, but starting off with it oh my God, how am I going to do this, you know, and once I got into it, and **Brian**, and Me and Coleen we went studying together before Christmas, and by God, did I know it inside out and... you know so its opposite, but the thought of it was daunting to start with but em, I wish we actually done it for longer and I think, obviously you know, some people will be doing it more so in their thesis, there will be more statistics and more of that, where others won't have as much, but, em I thought it was very very good. I did, but I think like that... there could have been more scope; there should have been maybe more time for that.

Comment [KM88]: GP - Aishling went from fear of statistics to feeling it was her favourite subject (Key phrase); 'wow did I get into it and I went from actually disliking it to feel probably my favourite subject out of all of them...'

Kevin: Did you find the podcasts useful...?

Aishling: Ye, ye, ye, ye, em, in that we could, when we were commenting on each other's work, is it? (Kevin: No, the video, the podcasts that were up with sort of...) Yes, yes, and you would ask questions and you would ask what was wrong with the video or what was, ye, ye, I found that, and I said that to you that I found it very very good, very very good. Because in the space of a few minutes you were able to get the real real em, (Kevin: Ye, that's what I sort of meant by the learning tasks, the steps in the learning tasks) Yes, yes, I thought that one in particular that you put up on the e, what is it? (The sum of) ye (Kevin: Oh, your talking about the Chi-Square) **Yes, do you know you put up something there like those little videos that I think are very very short and to the point and I found them very very good.** (Kevin: And of course you can review them) Exactly.

Comment [K89]: PP - Aishling found the podcasts 'very very good'; 'Yes, do you know you put up something there like those little videos that I think are very very short and to the point and I found them very very good'

Kevin: And Aishling, can I ask you about the assessment scheme. If you remember in your research methodology, you had, you were told what the different marks were for (Aishling: Ye) in your proposal when it came in, you know it was divided up into different marks for different points (Aishling: Exactly). It wouldn't apply so much to the statistics, because that was a sit down exam (Aishling: Ye, ye) there were model solutions obviously which you couldn't have... but that assessment scheme, do you feel it was communicated reasonably, number one, and number two, did you think it was fair? (Aishling: Yes). For your research proposal, the way it was assessed.

Aishling: Ye, the one... that I had to put into you. **Most definitely, I think the marking scheme was very, we were told what it was and I think, I never because at the time I would have said whether to myself oh this doesn't seem or there, but I think it was a very fair marking scheme.**

Comment [K90]: PP - Aishling was communicated the marking scheme which she thought was fair

Aishling: Post Interview Impressions and Interview Transcript

Post Interview Impressions

Aishling is a young mature learner with an enthusiastic and emotional presence. She seemed to experience a great sense of achievement in relating that she went from dreading statistics to it becoming her favourite subject. Overall her experience was very positive. She did feel that the module required more than one semester to teach and learn properly but seemed impressed with module delivery on all three fronts; active leadership, active learning community; communications of module elements. Her only frustration during the module was the short period over which the module was delivered.

Interview Transcript and Coding

Kevin: And the first thing I am going to ask you about is, back to day one, I don't know how well you remember it, the induction session and Moodle and what I want to know is if you felt you got a good overview of the course, you know sufficient to let you know what it was all about and maybe even gauge a little bit of your progress it, as it was progressing.

Aishling: Ok, as it was progressing, and this was with the whole research methods, the statistics an...

Kevin: I think primarily with the research methodology

Aishling: Ye, ye, em, definitely from day one we were told, we knew what, where we were going, you presented us with, you know, plenty of information that we knew where we were, we knew what to focus on and we knew em, you outlined basically the course and what was, how it was broken up and each of the particular em parts to that. Em, the only thing, the few issues that I would have regarding the research methodology is that if for them to be run from September to December that if one subject say statistics were taken in one half and the research methodology maybe in the other half, rather than combining the two.

(Kevin: Ye, ye)

And I think that was the big issue with a lot of people that is was kind of a bit you know, you would be no more finished one thing then you would be kind of, where if you had time to focus one, one area and then move on to the next and leave the other behind... I think that was, that was the general kind of feedback that (Kevin: Ye, there was) I know you couldn't organise it any other, that was the way you had to do it, wasn't it (Kevin: That was a given for me, yes, that was a given). Ye.

Kevin: Did you see the connection between your research methodology and your research proposal? What stage did that? Did you see the relevance of it...

Aishling: definitely, most definitely, everything that you did give us, all the information was, was em very much em helped, helped me anyway, particularly personally it helped me preparing the research proposal and the objectives and em all the course material was...

Kevin: Did you feel comfortable with the, eh, learning objectives that you were communicated? You know sort of clear and precise learning objectives for the individual topics.

Aishling: Most definitely, most definitely, ... you're talking about the statistics as well? (Kevin: Ye I am talking about the statistics as well) Ok, well everything, everything was in

Comment [K84]: PP - Aishling felt she got a good module overview - 'we knew what, where we were going, you presented us with, you know, plenty of information that we knew where we were, we knew what to focus on and we knew em, you outlined basically the course and what was, how it was broken up and each of the particular em parts to that'

Comment [K85]: G - Aishling suggests that research methodology and statistics taught as one module was a big issue in the class (No control over this)

Comment [K86]: G - Aishling saw relevance of statistics

Comment [K87]: PP - Aishling felt she was provided with clear learning objectives 'I've never left the room as in any doubt as what I, what I felt I had to do, you know, and em...

students (Kevin: It's much easier than typing) Well ye, ye, because you're talking and people prefer that ye, (Kevin: And well I suppose it's a little bit richer as well.) Ye, it is oh ye it is, it's a new stance maybe on the whole communications thing, its you know... very good.

Kevin: Can I ask you about an active learning community, you hit at it a little earlier when you said you were, you know, you tackled the stats, you seemed to do that with a passion within a group, how, what sort of a level of an active learning community did you feel in the class?

Aishling: We are all, [we all had our own little meet..., our own little groups] I think and some of us obviously worked better with others and some of us don't like pressurising those that maybe do not have as much maybe of an interest so we always went kind of with the same kind of group that had the same motivation, wanted to get things done any you were on the same kind of level in that way, and when you did meet for statistics or any of those, by God [did we really really work brilliantly together] (Kevin: You were in a group with Brian?)... for that particular statistics, Brian, Coleen and myself, three of us there for a few days before the exam and we were there from nine to whatever, five and by God did I not walk down the road but I knew everything... but I actually really like it now (Kevin: Good, I'm actually glad to hear that). Especially... of all the exams and it was the one I dreading least (Kevin: And you never thought you would be doing statistics?) No, you see that was the thing, I didn't, I didn't, em... and it's when you are able to leave all the other subjects aside and just focus on one, like the Chi Square, I thought that was brilliant, and you know I actually picked that in the exam, I could have done number one which was easiest but I still went for the most time consuming one... I was literally within the two hours, just bang on two hours, because in some of the other subjects I only managed to do would you believe two questions even though I had to do three so I picked the ones that I actually you know, so it's amazing what a bit of, when you can focus on one thing and forget about other subjects whereas there before Christmas we were, there was this, there was that, the other and em, there was quite a bit to statistics, there was quite (Kevin: I got the impression that the module was a little bit spoiled by the amount of work ye had to do, you know in other...) the amount before Christmas there was serious burnout people were just you know... whereas now things great because we came back after Christmas and for a few weeks there we just kind of you know, we didn't feel that we were coming or going, there was nothing really happening, whereas some of that could have been phased out I think, you know, it seemed to be concentrated sometimes and there was a week or two of nothing and you know, like even next week for instance there is three, people have three, one worth 40% which is a huge, you know, along then with your work placement on a Tuesday, you know, I think things could be definitely phased out a bit better, you know, and then you get a chance to enjoy actually really relate to the subject and enjoy it. Like statistics... you could really focus on it and really, whereas it was kinda spoiled for the class where you had only a week or two or a few days really, you know.

Comment [K97]: PP - Aishling perceived an active learning community

Comment [K98]: PP Aishling felt her group 'by God did we really really work brilliantly together'

Kevin: I've asked you about the active learning community, now there is only two more and the next one is on general and personal feedback for that module. Did you feel that was adequate, you know, including the audio feedback? Overall feedback as a learner.

Aishling: Ye, from you? (Kevin: Ye) [Top class, top class, absolutely brilliant]

Comment [K99]: PP - Aishling was impressed with levels of feedback as a learner 'Top class, top class, absolutely brilliant'

Kevin: And how important was it to you.

Kevin: And was that important to you?

Aishling: Well it was because I put the work in you know, and I felt then em, whatever mark I got at the time that em, it was justified and I think I deserve it, you know, (Kevin: I do know you were under a bit of stress at that time as well) Ye...

Kevin: Can I ask you something else as well and that's about the online environment, did you find it cluttered? (Aishling: No, no) Too much on it when you went..

Aishling: No, no other people said that and commented but never at any, you see at, some of the class have never really interacted with IT, and I think they were kinda, maybe, but everything was done under sections, you had them all outlined, particular sections, and everything that was in each section and I don't at any point because you could still access only what you wanted, you know, it was all up there (Kevin: Ye, you could go to the particular topic) But yes you could go to the particular topic you wanted, whenever you wanted it and access the material you know, whereas things done in class you can, orally cannot really be, you know, where this could be and that's where I found and anything you wanted to print off you could print it off and you could just look (Kevin: Ye, ye) e, but never at any stage did I think, and I think it is actually good to have it all up at once, because for some people may be further, progressing further, want to look on, you know, and I think that may be holding people back as well if you only put up a certain amount at one time. Those who maybe have more of an interest can, you know (Kevin: They can sort of direct their own...) ye, ye

Kevin: I am going to ask you, the next element I am going to ask you about, really and truly it's about me, there's no point in trying to hide it as sort of module leader and that's the concept of providing active leadership and what I mean by active leadership is some online courses people go online, they never know whose behind it or whatever.. it's the concept that there was somebody there overseeing everything, that was contactable if you had difficulties (Aishling: Oh ye), how did you feel with regard to that?

Aishling: Without a shadow of a doubt if there was anything, and we all said it, and me personally, I never at any day throughout the whole course that my questions weren't answered or that I couldn't approach you, or there was nothing, there was no stone unturned basically in anything that we had to do, there was online, you were constantly, any comment that was made any part of our proposal em, when somebody commented you were on the ball giving your feedback and you were constantly interacting with us, constantly, on a one to one and as a group and... that's across the board that the class have said that, we couldn't ask for more help and I think that's hugely important that as a student you are able to feel that the lecturer is approachable and that there is, you know, no issue that you have outstanding that you are afraid to address, you know.

Kevin: Did you find the texting useful, helpful?

Aishling: Yes, ye, very very good, (Kevin: Its relatively new...), ye, ye and I think that and the feedback, initial feedback from the proposal that we got em, we listened to online, I think that was brilliant, it was consuming from you, from that point of view but on a one to one it was hugely beneficial, hugely beneficial because you could play it back, play it back, take it step by step and you know, I don't know how many lecturers or if lecturers or if lecturers do that but it may not be feasible if you have quite a number, a number of

Comment [K91]: PP - Aishling felt a fair marking scheme is important "Well it was because I put the work in you know"

Comment [K92]: G - Aishling did not find Moodle cluttered because: 'everything was done under sections, you had them all outlined, particular sections, and everything that was in each section and I don't at any point because you could still access only what you wanted, you know, it was all up there'

Moodle gave Aishling more control over her own learning - 'and I think it is actually good to have it all up at once, because for some people may be further, progressing further, want to look on, you know, and I think that may be holding people back as well if you only put up a certain amount at one time'

Comment [K93]: GP - Moodle gave Aishling more control over her own learning - 'and I think it is actually good to have it all up at once, because for some people may be further, progressing further, want to look on, you know, and I think that may be holding people back as well if you only put up a certain amount at one time'

Comment [K94]: PP - Aishling gives testimony to level of active leadership: 'Without a shadow of a doubt if there was anything, and we all said it, and me personally, I never at any day throughout the whole course that my questions weren't answered or that I couldn't approach you, or there was nothing, there was no stone unturned basically in anything that we had to do, there was online, you were constantly, any comment that was made any part of our proposal em, when somebody commented you were on the ball giving your feedback and you were constantly interacting with us, constantly, on a one to one and as a group and... that's across the board that the class have said that, we couldn't ask for more help and I think that's hugely important that as a student you are able to feel that the lecturer is approachable and that there is, you know, no issue that you have outstanding that you are afraid to address, you know,

Comment [K95]: PP - Aishling found texting useful

Comment [K96]: PP - Aishling felt audio feedback useful: 'ye, ye and I think that and the feedback, initial feedback from the proposal that we got em, we listened to online, I think that was brilliant, it was consuming from you, from that point of view but on a one to one it was hugely beneficial, hugely beneficial because you could play it back, play it back, take it step by step'

Kevin: This is much appreciated, the interview is intended to be sort of unstructured, and really what I want you to do is talk about the things that were important to you, things that perhaps you felt strongly about. So these are just prompts, and the first one is with regard to a module overview, at the beginning of the module, did you feel you got a sufficient overview of it to sort of help you monitor your progress through it?

Caitlin: Em

Kevin: If you remember the first session... at the outset of the module

Caitlin: Ye the breakdown of the marking scheme, ye I thought that was very good, ye that told us a lot more about what we expected I suppose through the module. I wasn't expecting as much statistics from the beginning, but we figured that out eventually. But from the beginning I did think it was going to be more or less just all research methodology based and more about...

Comment [K102]: PP - Caitlin felt she got a good breakdown of the marking scheme; 'Ye the breakdown of the marking scheme, ye I thought that was very good, ye that told us a lot more about what we expected I suppose through the module'

However, she did not expect as much statistics

Kevin: So was the statistics a little bit of a shock to you?

Caitlin: It was ye (with a laugh), it was indeed, yes it was, ye

Kevin: I'm just moving down towards the second point now, eh, the learning objectives, very very much related to the first question there but what I am talking about is the learning objectives at the beginning of the different sections. You know like when we set out to do some statistical tests. Did you feel comfortable with them, did you feel you were communicated the learning objectives reasonable well?

Caitlin: The statistical part of it?

Kevin: Overall, for both, or did you see a difference in them?...

Caitlin: Ye, it was probably better with the research methodology, em from what I can remember, you know, we knew exactly what we had to do for that, you know and for the time frame. Em, Em, maybe it was just me. I got a bit of a shock about the statistics I think. Maybe the title of the module, would need to be may be changed.

Comment [K103]: PP - Caitlin was happy with the marking scheme for the RM element; 'we knew exactly what we had to do for that, you know and for the time frame'

Kevin, Ye, Ye, you saw the module as research methodology, rather than research methodology and statistics

Comment [K104]: PN - Caitlin did not seem aware that statistics was 50% of module (Change Module title)

Caitlin: ye, at the beginning I did ye.

Kevin: And even though the PowerPoint presentations you know at the outset of them, when I started them off for each topic in statistics was a number of learning objectives. I just wonder why it didn't register. Maybe they mightn't be meaningful or something to you

Caitlin: Ye, maybe we just had to get more into the module before it would be...

Kevin: Ye, ye, I can see that now, where you would need to develop an understanding of the test before you could associate the learning objectives with it.

Caitlin: Yes, ye, and because they were very like say they were very. I thought they had two very different objectives really... I would consider them to be very different, one to be based on just the thesis in general, and the other to what I would consider maths based. To me that's and maybe it shouldn't be, because I suppose there's a lot of statistics to be

Comment [KMH105]: GN - Why do learners not see the relevance of statistics to RM; 'I would consider them to be very different, one to be based on just the thesis in general, and the other to what I would consider maths based'

Aishling: Everything, everything that em, I thought it was hugely important, I think it motivates you, and this feedback it motivates you and you kind of know where you stand and it's brilliant to know where you are going wrong and it's all obviously constructive criticism no matter what, like the first draft I sent as a proposal, I hadn't got a contents page, I had nothing in, and I had taken as you said, I paraphrased a lot of the material and you know, I hadn't put enough probably time or effort into it and just being able to get that and I think hearing it kinda orally I think is much the non, you know it's more informal maybe than seeing it on, you know. Em, but hugely beneficial, hugely beneficial, feedback was brilliant, absolutely.

Comment [K100]: PP – The importance of feedback to Aishling 'I thought it was hugely important, I think it motivates you, and this feedback it motivates you and you kind of know where you are going wrong and it's all obviously constructive criticism'

Kevin: Well finally Aishling, I'm going to ask you about your own experiences with regard to the module, you know, as frustrations, was there anything good or bad?

Aishling: Ye the main issue was the two, the statistics and the research and the thesis in for those, how many weeks was it? (Kevin: 13). Thirteen weeks was you know, was too little time for...

Kevin: How did that make you feel?)

Aishling: Oh, times of huge frustration, and there was, there was, and that was the big issue, you know, that was. If that was phased out properly and half of it even this semester, if the statistics could have been done after Christmas, which it could from January to Easter, you know, and focus the other part for that 13 weeks. I think it would be...

Comment [K101]: GN – The major source of frustration to Aishling was that module delivery time was too short. She feels 99% of Class were of the same opinion. (No control over this)

Kevin: That's good information for me to have moving on

Aishling: And that's 99% of the class were of the same, were of the same

Kevin: Well I have got a similar comment from nearly everybody, you know...

Kevin relates the hope that this situation can be dealt with a course board level

Aishling is thanked and the interview concluded.

Caitlin: Post Interview Impressions and Interview Transcript

Post Interview Impressions

Caitlin is a mature learner and seems well able to articulate independent thought. She has an innovative nature she provoked me to thought on improving the process of peer review, and achieving better engagement on statistics through use of discussion forums. She does not seem to see the connection between the statistics and the research methodology but I feel that will crystallise when she undertakes her research dissertation. She appreciated the audio feedback, the feedback when learners presented their proposals to potential supervisors and the podcasts. Deadlines are important to Caitlin as they give her focus on what need to be done immediately. She has also provoked thought on the design of the online environment and what should be visible to learners with a view to reducing clutter. Overall this interview represented 'the partnership in research' as I was provoked to thought and several ideas were formulated in my head during the discourse.

Interview Transcript and Coding

Caitlin: That was good, yes it was, ye

Kevin: That was a new experience for me as well

Comment [K109]: PP Caitlin felt audio feedback 'was good' and 'it worked perfectly'

Caitlin: It worked perfectly, ye, well I mean em, I thought it worked perfectly. I was good to be able to go through, now unfortunately I think there was, the text and the audio, you had some things written on the text that didn't get sent to everybody. When I was reading it, when I was listening to your audio I was reading just my version of the proposal, ye. Whereas you had put in em notes, and you had numbers, and I think most people didn't get the connection. We didn't get the text that you were operating from so em but...

Comment [K110]: P - need to demonstrate to class how to use 'audio feedback'

Kevin: So you didn't actually have the reviewed version, I wonder how that happened?

Caitlin: I think you sent it to me and maybe Carolina asked you as well about it. But I think the majority of the class didn't get...

Kevin: I'm trying to remember whether it was... when real player started or windows media player, you needed to minimise it to see the text behind it. But the audio was actually embedded in the reviewed text.

Caitlin: Ye, maybe it was just that we couldn't do it, I don't know or something happened. I myself anyway had to just look at the version I had sent to you and try a figure out from what you were saying. And I wasn't sure I didn't know whether I should be looking at something and I thought why have I got different numbers that. I don't think it worked to be honest. But it was very good, now the audio was very good even so.

Kevin: No, no... I think that that's a good lesson for me because I probably could do a dummy run on that in class and show the students how to use it.

Caitlin: It was useful because... you would still have the proposal in front of you and be able to go through it but it would have been better. I think you sent it to me afterwards, and I think Caroline, after I had maybe sent the proposal back and I said oh ye now I see over all the numbers you were referring to were exactly...

Comment [K111]: PP - Caitlin -Audio feedback good because 'It was useful because... you would still have the proposal in front of you and be able to go through it, but it would have been better' - (Reinforces need to demo audio feedback for class)

Kevin: Ye, because you see they went together, the audio with the comments.

Caitlin: Even so, the audio was very good and it worked brilliantly and it was very clear. No, it's a good idea but maybe to be careful that we know how to use it that it works properly.

Comment [K112]: PP - Caitlin felt audio feedback was 'very good', 'worked brilliantly' was 'very clear' and a 'good idea'

Kevin: Ye, it is one of the issues, and it is one of the issues that hit me with regard to Moodle and discussion forums and things that there was really no time for me to give any Moodle training in class. There just wasn't time

Caitlin: And there was very little time for us to engage with Moodle, you know, it was very hard because we had long deadlines and em...

Comment [K113]: P - reinforces argument for giving marks for engaging with Moodle

Kevin: It probably would have been better for you the second semester.

Caitlin: Ye, possibly

blended into the thesis but for some people, for me, they're different you know they're completely diverse topics and when you are trying to blend them into one and people are, are em giving them different places in their mind.

Kevin: Ye, we did have a sort of quantitative versus qualitative debate, (Caitlin, that's it ye) we attempted that at the beginning but it wasn't really taken up... maybe that was time pressure or whatever, but they are blatantly different animals, there's absolutely no doubt about that

Caitlin: I think maybe that's what I didn't grasp at the beginning.

Kevin: Ye, ye, that's absolutely fine. Point number three there, the communication of instructions on achieving the learning tasks. Now if I could just say to you, that that's more appropriate to the statistics element of it, you know where you had the podcasts to show you how to do things. I'd be interested to know how you felt about that.

Caitlin: Oh, I felt that was very good, really good, eh, that was fantastic, you know for revising. They were very helpful. I found once you got, you know, on your own with your laptop and you went through them maybe a couple of times and they seemed to just click, they were clear. Ye, they were very to the point.

Kevin: Would you say they had an impact on your overall results?

Caitlin: Absolutely, definitely, yes, ye

Kevin: And with regard to recommending more or less. Would you recommend more or less?

Caitlin: I would say more if anything, I mean for me it was fine but if anything you would probably go more... you wouldn't say less

Kevin: And the textual elements that were put up on Moodle, were you tempted to engage with them very much or did you find them useful.

Caitlin: What do you mean...?

Kevin: You know, the textual elements eh, you know like introductions to different tests.

Caitlin: Ye, there was good background because I like to have a background of things. I like to really understand in my head the bigger picture, you know rather than just sort of learning something off I think for the statistics it's good to know why your doing it and, ye just the bigger picture. Ye I thought that was good, just to have them explained.

Kevin: You mean just to sort of put them in a context?

Caitlin: Yes, yes, because you could just you know like I say its very easy to learn things off by heart but then when you are given a question, unless you really understand the meaning of them, you know you're probably going to be confused... so em ye, I thought that was very good too, very useful.

Kevin: Can I ask you about the audio feedback

Comment [K106]: PP - Caitlin saw value in podcasts 'Oh, I felt that was very good, really good, eh, that was fantastic, you know for revising. They were very helpful. I found once you got, you know, on your own with your laptop and you went through them maybe a couple of times and they seemed to just click, they were clear. Ye, they were very to the point.'

Comment [K107]: PP - Caitlin felt podcasts improved results; 'Absolutely, definitely, yes, ye'

Comment [K108]: PP - Caitlin found textual elements on Moodle useful to 'just to have them explained'

Kevin: One of the findings from a previous study you see was that the module that I looked at sort of what is known as salience of leadership. You know, people sent emails, they couldn't, weren't getting answers back, they were waiting for advice and didn't feel they had access to the tutor

Caitlin: No, I know I had access and there was the feedback, the audio feedback, that's very very helpful, em, no, I thought that was very good. No problems there.

Comment [KMH121]: G - Caitlin associates feedback as 'salience of leadership' - perhaps in a hierarchical sense 'salience of leadership is top

Kevin: And can I ask you about, with regard to an active learning community... I attempted a few times to get groups working together and I know myself with different degrees of success or failure (Caitlin: yes). Whatever way you want to put it. Did you perceive yourself as a member of an active learning community? Part of groups or whatever, you know. Did you do much learning together?

Caitlin: We did, ye we did. When we started off the probability first, em, we, em had a little group together to sort of em, figure out ok, who knows it and who doesn't you know and just ideas. Just going over it for our own benefit. Em so ye we did and also with revision for stats we got into informal groups and helped each other out that way but then there were also groups with the em, the proposal em, telling each other what we thought so that was good, that was interesting you know to look at other peoples proposals...

Comment [K122]: PP - Caitlin felt part of an active learning community

Comment [KMH123]: G - Why does it seem that group work is applied more by learners in Stats than on RM

Kevin: Peer feedback... did you get useful feedback?

Caitlin: It was strange overall em, well I think most of it was 'Oh ye it's very good, continue along as you are' so I think maybe that we are not used to you know. Giving our peers critical feedback, you know you do not want to hurt people's feelings (with a laugh)

Comment [KMH124]: P - Should peer review be built into assessment? - yes, informed peer review (Caitlin)

Kevin: Oh, it can be hard to do it (Caitlin: ye). Absolutely hard to do it

Caitlin: I don't know how much. Do you think that, that that was helpful because I was looking at them everybody was very very complimentary (with a laugh)

Comment [K125]: G - Does peer review tend to be complimentary rather than critical? 'everybody was very very complimentary'

Kevin: Well ye, I got the impression from some of them, that right, this is something that is expected of me, I better do it and I'll do it creating as few ripples as possible. That's the overall impression that I got you know that there was very very little critical or constructive feedback from peer to peer.

Comment [K126]: G - is this the typical learner perception of peer review? 'Well ye, I got the impression from some of them, that right, this is something that is expected of me, I better do it and I'll do it creating as few ripples as possible'

Caitlin: ye, and I think the other as well probably for myself I wouldn't feel that I'd have the em, you know that I would be capable of criticising someone else's proposal, you know.

Comment [KMH127]: P - Reward for critical peer feedback and engender confidence in learner to provide it

Kevin: But yet when you're putting your own together, you're expected to be critical of that (Caitlin: ye). Do you see where I am coming from?

Caitlin: Ye, it's something that I'm sure needs to be, you know, nurtured maybe from previous years, if you were used of doing it, but...

Kevin: Do you think that I could have raised the expectations or done anything to get better engagement ?

Kevin: Can I ask you about the assessment scheme. There was one assessment scheme for the research methodology and another for the stats. Did you feel that you were communicated, that you understood how you were going to be assessed?

Caitlin: Yes

Comment [K114]: PP – Caitlin understood the assessment scheme

Kevin: That was the first question, that you had a reasonably good understanding.

Caitlin: Right, you mean with the presentation and the first research question and all that. Ye that was very clear

Kevin: Ye it was clear to you what you needed to do. And with regard to the statistics

Caitlin: Yes, ye

Comment [K115]: PP – Caitlin understood and was happy with the assessment scheme for the statistics

Kevin: Of course the statistics was an exam, you know

Caitlin: Exam ye

Kevin: And what I'd be referring to with regard to the statistics I suppose is you would have been aware of the weighting and everything else, ye

Caitlin: Ye

Kevin: Now the online environment, how did you find Moodle itself? I want to know if you found it cluttered at times, if you found it easy to use, difficult to use,.

Caitlin: Em, I thought it was pretty good in general, but em I suppose, maybe a bit cluttered in that you put up all the, or most of the stuff up there, in the beginning, you know, and you maybe it would be easier if you put up the relevant pieces as you went along

Comment [K116]: G – Caitlin had an opposite understanding to Aishling and felt 'maybe it would be easier if you put up the relevant pieces as you went along'

Kevin: Ye, ye, that's a good idea

Caitlin: Ye because it was very, there was a lot of information

Kevin: And there is a feature to hide it (Caitlin: can you), I can hide it. But the problem is when you are trying to get students to take control of their own learning, you need to leave the facility where they can move on ahead of you or to be behind you and revise on older stuff...

Comment [KMH117]: G – It may be a idea to consult with learners and or just leave one or two future topics up

Caitlin: I suppose just because with all the different stuff you weren't quite sure, maybe as you were going through it which was relevant to which piece and maybe it's a bit too much baby sitting but I think if you put a piece at a time it's easier to see what your doing

Comment [KMH118]: F – Maybe a discussion forum on Moodle about the module on Moodle – or use podcasts to facilitate learners in learning Moodle itself
Podcasts on using Moodle

Kevin: I gather from what you are saying that maybe a clearer demarcation between topics, that would have been useful (Caitlin: Ye). With regard to active leadership during the module. Now this is a sort of academic concept, but did you feel that there was somebody there to offer support, who was keeping an eye on your progress, (Caitlin: You?), ye in general ye.

Comment [KMH119]: F – next implementation really need to highlight both elements of module equally

Caitlin: Ye, I do think so ye, you're pretty easy to find

Comment [K120]: PP – Active leadership 'you're pretty easy to find'

Caitlin: Ye, but we actually all learnt from it em, and we hadn't really planned maybe staying for them all but we ended up staying for them all because we thought this is interesting, ye.

Comment [K135]: PP – Caitlin, All learners learnt from individual feedback given subsequent to presentations

Kevin: And the second last question I am going to ask you is about personal feedback, you know, that's individual feedback which you would have got that day as well and throughout the module.

Caitlin: Ye, there was the audio feedback as well, ye, I thought it was good, it was very good feedback.

Comment [K136]: PP – Caitlin felt audio feedback was 'good, it was very good feedback'

Kevin: Do you think it was sufficient? Could it have been improved? You know, If I said to you look I'd like to improve that next semester, how would you advise me to improve it?

Caitlin: Em, maybe if you did, maybe with the statistics, if you had everyone to answer a question on statistics online or something like that, and I think with that, maybe the very specifics em, because, as I said, we have a lot of deadlines, we're all working towards them, but you didn't really give us a lot of deadlines em, for the feedback. You wanted us to engage but because we didn't have a deadline you know maybe we shoved it over because we had the deadlines for tomorrow, you know on some other module...

Comment [K137]: F – Caitlin Suggestion to better use forums for statistics

Comment [K138]: F – Should have provided deadline for engaging with forums

Comment [K139]: F – Make marks available and provide deadline for engaging with forums

Kevin: I get the impression that ye are deadline animals that it is the next deadline that counts.

Caitlin: Well there are a lot of deadlines so, you know, that is the only thing you have focus in your head, you know, this time on this day something has to be done. Sometimes it's the only way you can prioritise your workload, what's coming up next and you know, especially that semester, like I say, it was very regimented, everything we had to be done, em, but I think maybe like small, like a little small em question you know and this small topic that you can do maybe in five minutes and just put it up and say we will have to have this up by, you know, a couple of days time...

Comment [K140]: F – Why deadlines are important 'it's the only way you can prioritise your workload'

Kevin: And there is a sort of a question and answer type discussion forum that would have suited that. And overall, right, looking back at your own experience in undertaking this module is there anything that could have been done to improve it? What could have been done to improve it? To make your experience a little bit better. What was the worst experience you had for example and how could that have been improved?

Caitlin: Em, I think maybe deadlines for that em, like I say just small little chunks of things, not a huge thing that has to be done, but to setup a question that you could do maybe in five or ten minutes and put it up by tomorrow night or the next night or whatever. I think that might have been easier for us, focus on that, because ye, the times might have been easier for us focussed on that. Because, ye, the time management thing is tough and...

Comment [K141]: F – One respondent in the second phase study dreaded not having deadlines - Caitlin feels deadlines for contributions to forums would have improved her experience

Kevin: Obviously time management is a big thing.

Caitlin: It is, ye.

Caitlin is thanked and interview concluded.

Caitlin: Maybe if you had questions you know maybe if you had very specific questions, you know, a,b,c, d and to get people really thinking, but I think the way it was structured it was just like critically analyse it, you know, so you are either going to say this is rubbish, or you are going to say you know, very good.

Comment [K128]: F – Perhaps give learners specific questions to respond to when providing peer review e.g. is the literature review broad enough?

Kevin: That's a good point actually. If I had specific questions you need to address.

Caitlin: Ye, and for us maybe just to help us to know, to focus us on how, which way to go and maybe to give us a kind of em, to make it easier for us to be maybe not very complimentary but say what I had to say.

Kevin: And maybe even some rating scales, you know (Caitlin Yes, yes) where you would rate something from one to five... that would be an interesting one.

Comment [K129]: F – Can I ask learners to rate grade the work of their peers?

Caitlin: Ye something like that to keep us focussed, it's something that I'm sure a lot of us weren't used of doing and were a bit out of our comfort zone in doing.

Comment [K130]: F – Need to give learner more focus to motivate them in providing peer feedback

Kevin: That's interesting, can I ask you about feedback, with regard to your feeling on general feedback first of all? Did you feel the class got sufficient general feedback on progress?

Caitlin: Ye, I do, well I think the presentation was very good for the em, for the proposal part of it

Comment [K131]: PP – Caitlin felt feedback on research proposal was good

Kevin: Ye, we're talking about general, eh specific feedback, or individual feedback with the proposals, you know when you presented the proposal. Is that what you are thinking about? You know there's two sort of different concepts, one is feedback to the class as an overall class, and then feedback to individuals on their own individual work. (Caitlin: right). So the first question was with regard to general feedback to the whole of the class. No I do know that when you presented your proposals that was also a class thing, so there was general feedback there and quite often it is hard to say well what is general feedback? When did it come? You know, and it is very much related to sort of active leadership in the concept of the overall class being aware of how they are progressing with the module... could that have been improved?

Caitlin: Well I think that that was, would be an example of general feedback because we all sort of participated, We all learnt from that. As the day progressed we became more aware of you know, oh this person is going to get it...

Comment [K132]: Caitlin on presentation. PP - Feedback mechanism also helped develop an active learning community; 'we all sort of participated'

Kevin: How did you find that?

Comment [K133]: Caitlin PP – Personal feedback can be shared and become a sort of 'proxy general feedback'

Caitlin: We enjoyed it. I enjoyed it, I thought it was good, I was very glad that I done mine in the morning, because if I did mine in the afternoon I'd have been, I would have been a bit more worried but em...

Comment [K134]: PP – Caitlin enjoyed session where potential supervisors provided feedback subsequent to learners formally presenting their research proposals

Kevin: You would have been worried after seeing the feedback...

Caitlin Ye, ye, I think we were luckier in the morning

Kevin: Do you, that's an interesting concept

and you had the podcasts for example. How, what did you feel about the quality of the instructions.

Coleen: Em, well I want to be perfectly honest (Kevin: Do be perfectly honest). I didn't view them that much, right. I relied more on sitting down in a group, you know, with three or four of us that were struggling with different questions and I found you know, going through it that way was better for me. But then, I'm not, em, I would always have seen eh, the computer and things as a weak link for me. I'm not, I wouldn't describe myself as being computer literate by any stretch of the imagination. Now, you know, the girls would say to me when we're working on projects, God, you're mad, you're fine, and you're at the same level as the rest of us. But for me it's always, it's there... and it's going to be there for a long time until I challenge, until I have the time to challenge myself and maybe do a few extra little courses where the IT is concerned.

Comment [K146]: P - Coleen did not view podcasts very much but did engage with groups to develop an understanding of the concepts (Coleen lacks confidence using IT)

Kevin: Would you have had difficulties looking at the podcasts, the little videos casts?

Coleen: No, I got around them, I got around them but it would take time, you know, it would take me time to get into them and get around them and listen to them, and I kind of felt you know we were so time poor that I couldn't be wasting time on doing that, that I would just sit down and I would go through the questions with you know a group, two or three.

Comment [K147]: PN - Coleen identifies a cost to her (in time) of learning how to watch podcasts - she found it easier to surmount the learning curve by working with groups

Kevin: So straight to the heart of the question

Coleen: Straight to the heart of the question, ye

Kevin: So you are a social learner to some extent, would you say that?

Coleen: Ye, ye

Kevin: That's interesting now, eh, the audio feedback then, I know there were some blips in that.

Coleen: On the research proposal

Kevin: Ye, ye, I think there was a problem with yours that the reviewed document wasn't the one that appeared with the audio file.

Comment [K148]: PN - A tutor error impacted negatively on Coleen's experience of audio feedback

Coleen: I just couldn't follow that... well I won't say I couldn't follow it. I could understand everything you were saying in the audio feedback, but when I went to my actual proposal I was kind of you know where are we now and what part are you talking about and what section are you talking about... and when you are trying to listen to it correct as you're going and take notes as you're going so all I did was I listened to it. I had to listen to it a number of times. I think I might have listened to it four times. I kind of wrote everything down as I was listening to it, you know, I kind of went back over it again and anything I missed I filled in.

Kevin: So you converted audio, transcribed (Coleen: Ye, ye). That's interesting all right. I think from my own perspective I probably would need to give a session in the class on using it (Caitlin: I think so ye) you know and get the points associated with the comments on the actual document.

Comment [K149]: F - Coleen transcribed audio feedback making its value to her questionable. Reinforces need for demo of audio feedback use

Coleen: Ye, that's what completely threw me, and that being said I can understand where you're coming from if you have to sit down with every student and go through the process

Coleen: Post Interview Impressions and Interview Transcript

Post Interview Impressions

Coleen is a mature learner who seems to have gleaned substantially from the module. She seems to have initially lacked confidence on her ability to complete the module but grew in confidence as she learnt and mastered learning tasks. She is apprehensive and lacks confidence in her IT ability and seems to have circumvented its use whenever possible. Her payback from ICT communicated learning took substantial time and effort to achieve. Overall she had a positive learning experience and in particular seems to see the importance of statistics and noted it as her favourite subject.

Interview Transcript and Coding

Kevin: The first point I want to get to is that at the outset of the course we had a sort of induction session, and I'm interested to know, do you feel you got a reasonable module overview at that and an idea of what was coming?

Coleen: Oh ye, well it's always very important to get an overview of what's to come and I did feel em, you know, that we got em a very good overview of what was involved in the course and I would have been happy enough with that

Kevin: Did you feel you were able to monitor your own progress through it, did you feel sort of the degrees of progress we were making as we were going through the module or...

Coleen: Em, monitoring it myself I'm not so sure about because was just kind of thrown at us from all the other modules, so it was kinda, I would have found it difficult to keep on top of you know monitoring everything I was doing.

Kevin: Ye, ye, ye did have a lot of deadlines (Coleen: Ye we had a lot). At the beginning of the different modules, with regard to the learning objectives... well obviously there's two different sets of learning objectives; the research methodology and the stats. Did you feel the learning objectives were specified clearly enough at the outset of the different topics?

Coleen: Em, I did, but where the stats were concerned, I mean I wouldn't have done anything with maths since I left school, 27 years, 27 odd years ago and I wouldn't really have concentrated a lot on that area you know when I would have looked at the overview of the course. I suppose I just panicked when I looked at that area. I thought I'm never going to be able for any of this, you know, and it would have been a big worry but em I suppose I just did the same as the rest of them. I plodded along and you know I tried the best I could kind of, work through them... as opposed to getting too upset and too worried about what was to come you know where the stats was concerned.

Kevin: Ye, ye, I perceive a sort of feeling that with the research methodology you could specify learning objectives, but with the stats you needed to understand the stats before you could understand what the learning objectives were (Coleen: Ye, ye) and... I got the kind of feeling that it was more difficult on the student to understand the learning objectives from the statistics, and with regard to communications on the learning tasks, now that does not really apply to research methodology because there isn't huge learning tasks. There was some with regard to the discussion forums, but in, with regard to the statistics the learning tasks would have been how to conduct the actual tests. How did you feel with regard to instructions on those, you know you had on Moodle some written instructions

Comment [K142]: PP – Coleen had a good overview of module and it was important to her; 'Oh ye, well it's always very important to get an overview of what's to come and I did feel em, you know, that we got em a very good overview of what was involved in the course and I would have been happy enough with that'

Comment [KMH143]: G – How can we support this (monitoring progress milestones, %'s)

Comment [K144]: P – at outset convince learners that they are capable of undertaking stats and that the required resources will be in place

Comment [KMH145]: G – Coleen panicked at the stats element.

Coleen: I found busy busy, em it would have taken me a period of time to get into Moodle, and I have to say I am fairly well into it now where the other subjects are concerned but I found when I would have gone on to your Moodle page it was like oh my God, so much you know it was so much information there altogether it was kind of where to start. Whereas with Carol Killarney who we have this semester, Carol would put up this week's work you know and this week's readings and then you know next week she would do the same thing. Now sometimes it's nice to have you know maybe to have, maybe two weeks work up together so you can kinda keep ahead. But I did find that with yours it was all this information just coming at you together in one big wave and for me I feel because of the fact that I am not very computer literate I found it daunting.

Comment [K155]: G – Coleen felt there was too much information up on Moodle

Comment [K156]: G – Computer literacy was a problem for Coleen and compounded the problem of having so much information up on Moodle

Kevin: That is sort of information overload (Coleen: Absolutely) and I can see that again there is a split in thought. Do we put up everything and let the student progress at their own pace through, slow down on the stuff that previously is still there or they want to move ahead because they want to go on a holiday you know. It's getting that mixture right, but its interesting that you should say two weeks, maybe that's a thought for the future. Or even if you had the current week, last week and next week in a block of three weeks (Coleen: Ye,ye) and reduce it as you go through it. That's interesting. Eh, the next question now is about active leadership during the module and I think we were talking previously, I think anecdotally about that. Eh, what I really want to know is if you felt that there was active leadership there in the background. There was somebody to seek support or help from, there was somebody to answer questions for you and you know you could approach somebody with your problems when you were undertaking the module and obviously I'm talking about myself as module leader. How salient and how much did you feel that was there?

Coleen: I felt that was there a lot, you know and I mean you would know that yourself. I came to you on a few occasions, you know and I always felt your door was always open that if I had any problem, be it with the research proposal or with statistics, you know that you were here em.

Comment [K157]: PP – Coleen felt a high salience of leadership 'you know and I always felt your door was always open that if I had any problem, be it with the research proposal or with statistics, you know that you were here em'

Kevin: How important is that to you for your...

Coleen: Hugely important, and it's not that you would want to be running to lecturers... you know, running to a lecturer every five minutes, you know, or that you would need somebody to hold your hand, ... em, you know, it's just nice to know, you know, if there's something that you don't understand that you can go and that you can ask and get advice because I'm not one of these people that can kind of sit in a class and not understand something and then just plod along and hope that everything will fall into place, you know, I like things kind of, you know, if I have a problem with something, I like to get it solved, I like to have learnt something out of it and then move on, you know, and I would have found when I came in here, I came in in second year so I missed the the first year and students would have done, would have covered elements which would be relating to IT which I missed out on and I did find that the IT lecturer that I had that year wasn't entirely accommodating when it came, to sort of asking questions in that regard... you just get stuck in there and you learn as you go, right, for me there was kind of a block there because when I came in here I was in my 40's like I had very little IT (Kevin: That's tough) experience and it was daunting and you know, I encountered another few other little problems where that was concerned, where one occasion I was asked If I was stupid and then you go away and you actually feel like you are stupid and it makes it more difficult, you know, to deal with (Kevin: Ye, ye) to deal with the problems but em, I think

Comment [K158]: PP – Availability of tutor was 'hugely important' to Coleen

Comment [KMH159]: G – Coleen Tutor must never make learner 'feel stupid'

with every student, you know it would take a huge amount of time, and then you know trying to get a student at a time that was suitable to you and a time suitable to them. So it probably worked out.

Comment [K150]: PP – Coleen feels audio feedback worked out because of logistics involved in providing F2F feedback

Kevin: You see if this worked and it was implemented in more detail, more detailed feedback, you'd have the record you know of it to review in your own time. You'd have student flexibility then (Coleen: Which is a good thing about it). But I'm beginning to see that it does need to be refined (Coleen: Ye, ye)...

Coleen: I think when it's refined it's going to work very well and it's going to be a very good idea because you can go into it then yourself at any time. You know if I come in here and I sit down with you and I go through something with you with regard to the proposal, that's it, I've had my 20 minutes done, it's dusted and I may not remember what you said, whereas I can go back over that and I can listen to it, you know on a number of occasions. I'd find it beneficial.

Comment [K151]: PP – Coleen sees value in audio feedback (review at any time)

Kevin: It would remove the need to be taking notes... you know which can actually be a distraction... Can I ask you about the assessment, the way you were assessed, with regard to research methodology it was your research proposal, and with regard to the stats obviously it was a sit down examination. First of all with regard to research methodology; did you feel that you understood the assessment scheme, how you were going to be assessed, and did you feel it was fair?

Coleen: I did ye, oh, I fully understood it and I thought ye it was very fair and I think it was very well done you know cause I think if it was just left and you had to hand in a research proposal on a specific date you know the tendency were there to kind of push things out whereas we were doing a little bit sort of each week and I thought you know the fact that we had to present as well, that was very good. I thought that was really beneficial and I know we were all sort of a bit scared going into it, you know the questions we were going to be asked, but I, in the second session that afternoon having listened to the questions that were being asked in the first session with regard to different peoples research proposals. When I went into the second session that afternoon, I could see exactly where the questions were coming from. You know, you could see where people were making mistakes and you could see where you would have even made mistakes in your own one, you know cause you sit down and you do it and you think it is perfect but you know and then when someone else starts you know, picking holes in it you know.

Comment [K152]: PP – Coleen felt assessment scheme was fair and understood; 'oh, I fully understood it and I thought ye it was very fair and I think it was very well done'

Kevin: It was almost a baptism by fire... to some extent you began to see how things could be critically torn asunder.

Comment [K153]: PP – Coleen sees substantial value in feedback - you see 'where you would have made mistake's

Coleen: Absolutely, and I think that is good for us going forward as well, you know I think, well the one thing I have learnt from it you know is I would definitely read my thesis before I hand it in, I would give it to several people to read, and I wouldn't you know if somebody came back with criticisms on it, you wouldn't take it as a personal thing, you know, you would go back and you would look at it all again and you would see if it can be improved and where it can be improved you know, its always nice to have you know another pair of eyes on your work you know and obviously the more...

Comment [K154]: PP – The presentation feedback changed Coleen's approach – she would review her own work and seek critical feedback from others.

Kevin: But you obviously... you obviously see that criticism is useful for improving the quality of what you are doing (Coleen: Absolutely). Can I ask you about the design of the online environment, Moodle itself, I'm asking the right one now (with a laugh from both)... Did you find it cluttered.

Coleen: We got more support and feedback in this subject than we did in any other subject, being honest about it, em, and maybe Joan Dunne's (pseudonym). Joan always gives very good feedback as well. They would be the two subjects that would have stood out for me in particular where good feedback would be concerned... and it's hugely important. I don't know how some of the younger students feel about it but, you know, as part of the mature group for me it's huge, it's hugely important. (Kevin: Well I mean it would be seen as one of the issues that is important for motivation, for monitoring your own progress and in that sense reduces stress, because if you reduce uncertainty you reduce stress).

Comment [K166]: RP - Coleen feels she got more support (active leadership) and feedback (communications of module elements in this subject than any other subject).

Comment [K167]: P - importance of feedback to Coleen; 'and it's hugely important. I don't know how some of the younger students feel about it but, you know, as part of the mature group for me it's huge, it's hugely important'.

Comment [KMH168]: G - Key observation, this demonstrates the construction of reality

Kevin: But overall, now finally if I can just ask you, how could your experience have been improved, you know now I can see for example how Moodle could be improved, your overall experience, your learning experience throughout that module. Could, could I do anything to improve it if we were starting out, starting out again now? What advice would you give me?

Coleen: Em, I would say separate the stats from, you know the way we were doing a bit on the proposal and then a bit on the stats. You know so, you know you picked a day when we were going to do stats and then we'd come in and somebody would have a question on the proposal and everything would shift sort of talking about the proposal... I think maybe if there was a clear divide you say right there's going to be four weeks spent on doing the proposal and we're just going to concentrate just solely on that and then we're going to concentrate solely on the stats. You know, there was a big mix where that was concerned (Kevin: Ye, ye and I think that's a fair comment) and you were coming in and maybe people had missed class the previous day and we had talked about the proposal and then they were in the next day and you kind of felt (exclamation) we are talking about this all over again, we did it yesterday and time is so limited and we need to be moving on, but you know, and as a student I couldn't say to another student, you missed this yesterday, we need to be moving on, you know, because we don't know what the reason is for the student missing the previous day, maybe they were sick, you know, (Kevin: Ye, ye) and everybody had to get, everybody had to get a fair, get their fair share of the college

Comment [K169]: F - Coleen's experience didn't seem to be improved by treating research methodology and statistics as separate modules.

Comment [KMH170]: PN - This is clearly a leader's responsibility - one area where I fell down regarding active leadership - learners missing class and then taking up tutor time at next class

Example of mix.

Kevin: Would it help if, you know, there was an outline notice which said at the beginning of the course which said on Monday 17th we're covering this on 24th we're covering whatever?

Coleen: Ye, ye, and I know that can be difficult to stick with cause the students ask you something else it, it can be difficult for a lecturer too to say I'm not dealing with that problem today (Kevin: Ye, ye, but all of these things, aren't they playoffs really, you know, you have to find some kind of a balance (Coleen: a balance) really).

Comment [K171]: F - Warn learners in future that classes will be (generally) limited to planned content

Coleen is thanked and the interview concluded

Catherine: Post Interview Impressions and Interview Transcript

Post Interview Impressions

Catherine had a positive module experience, however, she seemed to suffer a shock initially in coming to terms with the volume of work. She had mainly positive experiences, in particular the audio feedback; she used it as intended and seemed to get best value for it. She did feel however that Moodle was cluttered and found this de-motivating. While her experience was positive overall, it could have been improved if the tutor did not take

it is very important that lecturers are available to students.. (Kevin: Ye, ye) that a student feels they can go and pose questions (Kevin: Ye, ye, ye, ye).

Kevin: and can I ask you about an active learning community what I mean you know, group work, gelling as a sort of community of learners where ye support and help one another. Did you feel part of that during this module?

Coleen: Oh, absolutely.

Comment [K160]: PP – Coleen felt 'absolutely' part of an active learning community

Kevin: How important was it to you?

Coleen: Oh hugely important, hugely important particularly where the, where the stats were concerned, you know, I mean a number of us, maybe the fact that we were mature students and it's been a long time since we did anything with maths, you know, I suppose we were very apprehensive going in to it for a start em, and, we would have come together on a number of occasions and sat down, and you know, tried to reason things out and, you know, on some occasions I sat with the girls and Brian sat in with us or whatever, and you kind of just say, is that it like? Is it actually that simple when you sat down in a group and started to do it in a group? And you discussed it in the group it just became clearer you know so (Kevin: That's interesting). Ye, whereas I know some of the younger ones em, would have gone into class, done it, got it straight away, parked it and would have been able to move on, but, we would have just...

Comment [K161]: PP – Coleen reinforces the importance of an active learning community to her

Comment [KMH162]: PP – seems that Coleen's confidence was greatly improved through group work. The group helped her realise: 'Is it actually that simple'

Comment [K163]: PP – Social constructivism at work

Kevin: Did you feel a sense of achievement then, with the stats in particular, because, you know, obviously it was a challenge to you, the stats challenged you. Did you feel you mastered what needed to be done?

Coleen: I felt I mastered it, and I felt if I had to do it again, or if there was a choice, like you know, we had in third year and 4th year you pick some of your modules, it's not a choice I would have made but if I was to do it now it would be a choice I would make.

Kevin: Good, well that's very very positive). It was like, it was like someone opened the curtains you know and let in the light cause I never, even, even when I was in school, maths would not have been my favourite subject. It wouldn't have been something I really liked but when I sat down and I really understood what I was doing, as I say, it was just like as I say someone opened the curtains and let in the light you know, and I would have no, I would definitely, I would do it as a subject (Kevin: Well hopefully you will find it useful in a business context, I think that's an important element of this) Ye.

Comment [K164]: G – As Aishling, Coleen went from disliking stats to suggesting she would now choose them as an elective; 'I felt I mastered it, and I felt if I had to do it again, or if there was a choice, like you know, we had in third year and 4th year you pick some of your modules, it's not a choice I would have made but if I was to do it now it would be a choice I would make'

Kevin: Eh, the provision of general and personal feedback, you know, to the class where feedback would have come to the class as a whole, not sure if there was a lot of it actually, and personal feedback. Did you feel that general feedback to the class was sufficient? You know the class for example when you made the presentations it was sort of, it was individual feedback, but it was also general feedback as everybody attended the different sessions so you could see how the whole class was getting on. Did you feel that general feedback was adequate? Or could it have been improved?

Kevin: I did, no I think the feedback in this subject was very good, you know, both general and individual. I did feel the feedback was very good (

Comment [K165]: PP – Coleen felt feedback was very good; general and personal

Kevin: Particularly individual feedback, was that adequate? Did you get enough support through feedback? Could it have been improved? – The individual feedback.

Catherine: Em, no, because personally I need to do them myself, so when I see an answer to a question on Moodle, and you know, how did you come to do that, I need to not look at it myself and learn my own way and then I can compare their solution with my one then, so I can

Comment [K176]: PP - Catherine found it useful to compare her solutions with solutions posted on Forums [She needed to try it herself first]

Kevin: Would you consider yourself an independent learner then... you like to do it on your own do you?

Catherine: Ye, when it comes to statistics especially, other modules no, I'd rather do them with group support, but when it comes to this one I am better doing it on my own, ye. Just for the understanding of it (Kevin: Ye, ye)

Kevin: Did you find the audio feedback useful?

Catherine: I found it extremely useful. That was the first time I got actually audio feedback and it was great, because I was able to print out off my thesis myself and when you were talking I was able to highlight as I was going along what you were saying and what the em, recommendations you had on the sheet actually I found it really, really good, ye.

Comment [K177]: PP - Catherine used podcasts as intended and 'I found it extremely useful. That was the first time I got actually audio feedback and it was great, because I was able to print out off my thesis myself and when you were talking I was able to highlight as I was going along what you were saying and what the em, recommendations you had on the sheet actually I found it really, really good, ye'

Kevin: And eh, with regard to the assessment scheme, If you remember the assessment scheme in the research methodology, you got certain marks for different elements of it. Now, was that clear in your head? Was it made clear in your head and did you think it was fair?

Catherine: Yes, it was fair, very fair, because, em, with regard to other modules, we were given a report or different various things we had to do and we're not clear ideas of where the majority of marks are going for, but with this you are able to tick off as you were going along, do you know, I have addressed this question, I have addressed each part of it so I thought it was a very fair method of...

Comment [K178]: PP - The value of a fair and clear assessment scheme 'Yes, it was fair, very fair, because, em, with regard to other modules, we were given a report or different various things we had to do and we're not clear ideas of where the majority of marks are going for, but with this you are able to tick off as you were going along, do you know, I have addressed this question, I have addressed each part of it.'

Kevin: With regard to the online environment, the Moodle environment, how did you find that when you logged on?

Catherine: Em, I... there is an awful lot of content at the start, there is an awful lot of information put up on it and it can be a bit off putting at the start to be on it because you are just going from step to step and all this information is up there but once you kind of take it then in parts then it's kind of fine but maybe just not a much to be put up at the start.

Comment [K179]: PN - Catherine found Moodle cluttered; 'there is an awful lot of content at the start, there is an awful lot of information put up on it and it can be a bit off putting at the start'

Kevin: You suffered from a little bit of information overload?

Catherine: It was a wee bit daunting at the start to be honest

Kevin: And what were the consequence of that... did you find it difficult to find what you needed?

Catherine: No, it was just, it was hard sometimes to get a little motivated because, you're like, you kind of put it off... because, now, there is so much stuff here that it is hard to get through it all so your kinda like I'll leave it for another while and go back to it so it is a little off putting, the amount that's on it

Comment [K180]: PN - Catherine found volume of information on Moodle 'demotivating'; 'No, it was just, it was hard sometimes to get a little motivated because, you're like, you kind of put it off... because, now, there is so much stuff here that it is hard to get through it all so your kinda like I'll leave it for another while and go back to it so it is a little off putting, the amount that's on it'

questions in class which were not relevant to the class subject. This seemed to frustrate Catherine.

Interview Transcript and Coding

Kevin: The first thing I am going to ask you about is the module overview, your induction to the module, you know, did it facilitate you, did you have enough to monitor your progress through the module, was it fairly clear in your head what was facing you.

Catherine: No, to be quite honest because I hadn't done anything like this before, when we were introduced to the subject, we assumed that it would be mostly probability, em, we didn't expect to have the em, induction to our thesis done as well up until Christmas but then once we were aware of what we had to do it was quite clear what was expected of us then.

Comment [K172]: PN - The module overview was confusing to Catherine because of her expectations of the module: 'we assumed that it would be mostly probability' (There is a module syllabus)

Kevin: Did you see the relevance of, from the outset did you see the relevance of the research methodology to your research dissertation?

Catherine: Yes, yes I did, em but after when I realized what I wanted to do my thesis on at the time I didn't think it would be relevant because I thought that my research would be more qualitative but then when I researched what I wanted to do myself I realized that it would be more quantitative.

Kevin: Ye, you are going a little towards mixed methods, are you?)

Catherine: Yes I am.

Kevin: Now with regard to clear and precise learning objectives, for the different topics, eh, how did you feel about those? Did you feel that they were or weren't clear and precise or somewhere in between?

Catherine: No, they were clear and precise on what we had to do, em, because it was gone through step by step and an easy example was taken first and then it was developed into a more advanced level... we weren't thrown in at the deep end at the start on any up and coming modules we had to cover especially research methodology. So it was structured well.

Comment [K173]: PP - Catherine felt learning objectives were 'clear and precise' and 'well structured'

Kevin: And with regard to the learning tasks, the individual learning tasks which I said are more relevant to statistic where you have to learn the process of doing things, you have to learn the steps. Did you have adequate resource for learning those steps, did you feel?

Catherine: Ye, I found that the podcasts were very helpful on Moodle so they were, because it gave you time, because sometimes when you're in the class environment it's very difficult when you have a large group of people to follow it step by step, but then when you are able to do it individually it's an awful lot easier because you have to keep going over it sometimes to become more familiar with it, but once you have time to do that with the podcasts then it was quite helpful.

Comment [K174]: PP - Catherine found podcasts 'very helpful'

Kevin: Did you find Moodle useful with...

Comment [K175]: PP - Reason why Catherine found Podcasts useful 'because sometimes when you're in the class environment it's very difficult when you have a large group of people to follow it step by step'

Catherine: Yes, it was the most useful I found...

Kevin: Some students brought solutions to the stats (On to Moodle). Did you find those very useful?

Catherine: Yes, I did ye, now... when I was doing, when I was during the module I found that I didn't need to go to you that often, because there was such interaction within the class that when I was doing my thesis, I was able to send it on to you and then you just had prompt answer back to me saying I think you might structure it this way or maybe just change it to that, so you know, and it's good to have the critical feedback so it is you know but it was always prompt so it was.

Comment [K186]: PP – Catherine was happy with levels of feedback 'but others found that extremely useful as well because there was interaction, you know, between everybody so there was, you know, so everybody was willing to help each other as well so they were'. (Active community meets feedback)

Kevin: Ye, ye, that's personal feedback you're talking about (Catherine: For myself, ye, completely)

Kevin: Was that very valuable to you?

Catherine: It was, ye, because it was a daunting experience for me personally because I never done a thesis before and I didn't actually know what was expected, I didn't know where to start, how it was supposed to be structured so at the start I was just Oh my God, where are we going to go with this so it was great that I was able to just send it off to you and you were able to come back saying this is what you should do.

Comment [K187]: PP – Prompt feedback was valuable to Catherine

Kevin: And can I ask you finally at a personal level you know undertaking that module, did you have sort of any emotional experiences like real frustration, or real delight with results or elements like that.

Catherine: Em, sometimes in a crowd it could be quite frustrating because there were some people who had louder voices than others and they kind of took over the class sometimes so that was a little off putting so it was because sometimes you felt that the class was just for one certain person with regards to the whole itself, you know, so that was the most off putting of the module that I found.

Comment [K188]: P – Must ensure the class session is more of a level playing field for learners. It is important to keep the tone relevant to what is being covered.

Kevin: Was this because there was some people sort of hogging the questions and things.

Catherine: Yes, very much so, and maybe going of like you know, you might be doing a lecture on something specific and they might just give their opinion on something that was not relevant to the class at all and it was very off putting and sometimes some people might try teach you how to do something do you know whereas you were the lecturer and we were all the students and that can be very very off putting in the class environment.

Kevin: Any real good moments then

Catherine: Em I think just when we were just all trying to find our way during it... sometimes we would come up with the most ridiculous ideas and we'd just have a laugh. Like I might come up with an answer of 10 and someone might come up with an answer of a million and we'd just like how did we come up with these answers.

Kevin: Was this in the stats, is it?

Catherine: In the stats ye, and we were just like how did we come up with this and we'd just have a laugh then about it you know... it was good.

Catherine is thanked and the interview concluded

Kevin: Eh, now, the concept of active leadership, ok, which I said to you is a little bit personal I suppose, but, it is important for me to know how you really felt about approachability, if you felt there was somebody looking after the module and directing it and if you felt that you could approach me with problems or anything like this, were you daunted in any way about that or...

Catherine: No, no, not at all, from the very start like, you know, you came in and you were very approachable so you were, so do you know, first impressions are very important so, from the first day you were very very friendly so and anytime we had a question in class you put up your hand and you answered it as well as you could, you know, for us to understand it, you know, that's my personal opinion.

Kevin: Did you find texting useful

Catherine: Em yes, I did yes, because I forget an awful lot of things anyways myself you so it's good to have reminders and know, and they're also an attractive way of communication, so you still feel as if there is one and one communication between yourself and the lecturer (Kevin: And its reasonably instant) completely, ye, ye (Kevin: I think that's one of the huge advantages of it)

Kevin: An active learning community, how do you feel the class gelled and worked together, and then what I mean by an active learning community is for example, if you had problems, things you wanted to understand would you sit down as a group and negotiate a sort of understanding of things?

Catherine: Well, em, during the course we didn't to be honest but before the exam time we did, like em, even two days before the exam em, myself and four of the others, we actually just thought like... em study rooms and the library and we went through it so I knew part of the question and I would explain that to the group and then the other questions vice versa, everybody knew something somebody else didn't and it was quite a well learning process so it was, because I know then that you had the class before the exam but I was sick and I couldn't make it and it was like very detrimental to my exam mark you know, so but that was like my own fault but others found that extremely useful as well because there was interaction, you know, between everybody so there was, you know, so everybody was willing to help each other as well so they were

Kevin: Well I suppose that is an active learning community when people are willing to help one another. Did you make good friends during the year?

Catherine: Oh, God, ye, definitely, especially like when you have an awful lot of workload some people are quicker at doing some parts that other, you know in a group if somebody is finished first they'll go and help somebody else then regardless of whether they are in your group or not, you know.

Kevin: I've already asked you about the podcasts and I think you have made a substantial comment on those. I just finally am going to ask you about the provision of general feedback to the class in General, you know, I'm not sure if there is an awful lot of it required, and it would be based on how the class felt they were getting on in general. But there is the concept of general feedback, which is feedback to the overall class and the concept of personal feedback, eh, first of all the general feedback did you feel that was sufficient.

Comment [K181]: PP – Catherine experienced active leadership 'No, no, not at all, from the very start like, you know, you came in and you were very approachable so you were, so do you know, first impressions are very important so, from the first day you were very very friendly so and anytime we had a question in class you put up your hand and you answered it as well as you could, you know, for us to understand it, you know, that's my personal opinion.'

Comment [K182]: PP – Catherine found texting useful 'an attractive way of communication, so you still feel as if there is one and one communication between yourself and the lecturer'

Comment [K183]: PN – Catherine felt that an active learning community became evident only close to exams.

Comment [K184]: PN – Catherine 'Well, em, during the course we didn't to be honest but before the exam time we did, like em, even two days before the exam em, myself and four of the others.'

Comment [K185]: PP – Evidence of an active learning community 'but others found that extremely useful as well because there was interaction, you know, between everybody so there was, you know, so everybody was willing to help each other as well so they were' (Catherine)

helped an awful lot. It was kind of, you could pause it and work out one stage and then go back to it.. it's more kinda, you learn better because your actually practicing you're not kinda... I found, especially with lecturers, especially when you're doing statistics if you have got a lot of like literature, you would look, its daunting, you know when you go back... so definitely ye, the Moodle links and all that that's probably the best way to go about it.

Comment [KMH192]: P - Insight into how student might use podcasts - 'pause and play'

Comment [K193]: G - Michael found the Moodle links useful - 'probably the best way to go about it'

Kevin: Ye, the podcasts would sort of be related to your learning tasks (Michael: Ye), how to actually achieve (Michael: Achieve then ye) different things. You found that fairly useful?

Michael: Oh definitely, ye. I think it's a lot easier you know, to actually hear somebody doing it or see somebody doing it and then we had discussion boards and then... sometimes you wouldn't be confident you know, put you own work into it, but if you see someone else you can look at yours and it gives you a fair point where you are going wrong.

Comment [K194]: PP - Michael sees the podcasts as useful especially when used in conjunction with discussion forums; 'Oh definitely, ye (podcasts useful) I think it's a lot easier you know, to actually hear somebody doing it or see somebody doing it and then we had discussion boards and then... sometimes you wouldn't be confident you know, put you own work into it, but if you see someone else you can look at yours and it gives you a fair point where you are going wrong.'

Kevin: How important were the discussion boards to you?

Michael: Eh, ye, expecially, you know when it came near, three or four weeks before the exam, everyone was looking at them you know, especially with, there's one or two that everyone was struggling with but then there would be one in a class that figured it out and then you'd be looking at their answers and someone could leave a comment saying why did you do this... and that did definitely help.

Comment [KMH195]: PP - Highlights value of discussion forums (Social constructivism); 'then there would be one in a class that figured it out and then you'd be looking at their answers and someone could leave a comment saying why did you do this... and that did definitely help' (Michael)

Kevin: Eh, the assessment scheme, if you remember for your research proposal there was a fairly rigid assessment scheme it was broken up. For the statistics, I mean there was the model answers so it's not awfully relevant to the question but did you feel that that assessment was communicated to you properly or good enough, and how important was it to you?

Michael: Ye, that was good, you know when we first set our, first kind of initial meeting you said, gave us the handout and said this is what this is worth, this is what that is worth it kinda indicates like what needs to be in it when you see like percentage you know, attached to it, and there's no surprises, you know the way sometimes you'd be in a course and you'd get something and it's not clearly defined... it kind of narrows it down, how much effort and work had to go into that topic like.

Comment [K196]: PP - Michael felt the assessment scheme was good 'no surprises and 'it kind of narrows it down, how much effort and work had to go into that topic like'

Kevin: Did you feel it was fair

Michael: Ye definitely

Comment [K197]: PP - Michael thought the assessment scheme was fair

Kevin: Now with regard to the online environment when you logged on. How did you find it

Michael: There's just one thing eh, you know the Moodle home page sometimes there was so many bulletins and headings to click on. Maybe if you, I don't know like but if you just had like one kinda heading and you clicked on that and could see the other ones. Sometimes you'd only click in and you'd be scrolling down so much. If you only had a topic, maybe click on that and the rest pop up.

Comment [K198]: G,F - Michael obviously felt Moodle was a bit cluttered. F - Give learners collapsible content maybe colour code current or hot topics!

Kevin: Ye, ye, so you probably thought it was a bit cluttered.

Michael: Post Interview Impressions and Interview Transcript

Post Interview Impressions

The interview with Michael was concise and clear – he seems to have considered opinions on learning issues. He came across as a digital native expecting immediate access to information. For example, he found Moodle very useful and felt he got more of an overview of the Module on Moodle than he did at the long induction session. Michael gave the impression that he didn't take the research proposal serious until the presentations – suggesting added value to presentations.

Interview Transcript and Coding

Kevin: Now, I am going to go right back to day one, to the induction session, and the information you got, both at the session and on Moodle and I'm just wondering did it prepare you for what was to come? Did you get a good overview of what was to come? Or was there surprises later on?

Michael: em, I think the Moodle was actually better cause, you know when you go home and you have more time to sit down and actually take on the issues, whereas a lot more in class you find... say if you say a particular word, a particular topic it's more daunting whereas when you are at home or in college you take more in...

Comment [K189]: P – with respect to the induction Michael found Moodle more useful because 'when you go home and you have more time to sit down and actually take on the issues'

Kevin: How well did you see the connection between the module and your own thesis, research?

Michael: I'd say it really wasn't until after we had our presentation there in front of the board after that the thesis became more real, and then you actually look back to see what way you're actually going to find out your information and evaluate it, so I would say after that it kind of narrowed down your thesis.

Comment [K190]: PP – this is added value to the session where learners presented their research proposals for feedback from supervisors. It created focus on the thesis 'Michael: I'd say it really wasn't until after we had our presentation there in front of the board after that the thesis became more real' (The penny dropped)

Kevin: Was that when you began to take it real serious?

Michael: Ye, its kinda you know when the penny dropped, this is a proper thesis, you have to put a lot of time and effort into it.

Partick: Ye, because that seemed like fairly serious business (Michael: Ye definitely)... What kind of feedback did you get or...?

Michael: It was good, just to narrow down my topic a little bit, but I think ye, definitely it prepared you because I think before everyone in class was kind of terrified, you know, going in front of all the lecturers and in the boardroom. It stood to us all so it did.

Comment [K191]: PP – value of presentation highlighted 'It was good, just to narrow down my topic a little bit, but I think ye, definitely it prepared you because I think before everyone in class was kind of terrified, you know, going in front of all the lecturers and in the boardroom. It stood to us all so it did'

Kevin: It was a daunting experience, that

Michael: Definitely ye.

Kevin: Eh, with regard to the individual topics, did you feel that you were communicated clear and precise learning objectives? Were you comfortable with them?

Michael: Actually, ye, when I first, in secondary school all I ever done was past maths, I was never really good at it even in first year we had maths and I struggled, I used to go to every tutorial and I used to get a couple of tutorials, but this one, I think, you know the way you placed links online, you'd look and then even by the video links, I think that that

Kevin: The provision of general and personal feedback, general feedback with regard to the overall class having an awareness of their progression and how well they are doing. Would you have felt that was there? That awareness was there?

Michael: Ye, definitely, especially, I remember before we even had, you know the presentation of our thesis proposal and we all kind of submitted to you our ideas and our initial proposal, you got back to us straight away gave us pointers and. I remember even bringing... emailed you first initial, you emailed straight back and you had like the bullet points and the lines and which is correct. It gives you great kind of definitive answer where you are going wrong or what you should, you know do and stuff.

Comment [K205]: PP – Michael felt that class were aware of their progression

Comment [K206]: PP – Michael felt feedback was speedy; 'you got back to us straight away gave us pointers' (Michael)

Kevin: The eh, the personal feedback, of course you got feedback, personal feedback when you made the presentation as well?

Michael: Ye, that was good as well

Comment [K207]: PP – Michael felt that personal feedback was good

Kevin: You thought that was good? Ye, and the audio feedback, how did you find that, was it of any use to you?

Michael: It was actually, it's not something that we are used to, but ye, actually, I found myself, and everyone will say this I suppose, everyone (played it) three or four times, you know, just to get, because sometimes you just hone in on one point, but it was interesting you know, and it's good to hear someone opinion instead of just...

Comment [K208]: PP – Audio feedback was received well

Kevin: It was an interesting one for me myself.

Michael: It was, something different.

Kevin: Ye, it was an interesting experience and it seemed to have gone down fairly well you know. In general the feedback on it has been positive. Can I ask you now, just to wrap up, were there any major issues that you had throughout the module, you know, could your experience have been improved, could you have been supported better? Would you make recommendations?

Michael: I suppose the recommendation I would make would be the, just the Moodle home page, you know it's a bit cluttered and maybe if you, say before a class, an hour or two before it, that you popped up, a stat question and everyone could email, go on Moodle and put in their answer and then in class, if you could bring up our answers and kind of go through it that way it would be something interesting in class.

Comment [K209]: G – Michael felt that Moodle was cluttered

Comment [K210]: F – Michael suggests putting a stats question up on Moodle prior to class so learners could attempt it before class - in conjunction with future content on Moodle?

Kevin: Ye, ye, that would be interesting.

Michael is thanked and the interview concluded.

Pat

(Note: I am building the nature of the results)

Michael: Ye, just the home page on Moodle

Kevin: ye... you have made a fairly clear recommendation there, haven't you, that you know that it be engineered in such a way as you can drill down and the main body of stuff is hidden until you decide to drill down. The next question I am going to ask you now is about active leadership, during the module. Obviously I was the one leading the module. Eh, you know, things like your perception that there was someone over viewing the module, that they had a fairly active presence and that you would feel comfortable in contacting if you had any problems. How did you feel about that overall area of active leadership?

Michael: I think ye, definitely 'cause there was no problem, you know if you're too fast if we were struggling like there would be one or two people who would voice the opinion of everybody. You took lots of time and answered our queries. No one actually felt, you know with some classes you just, everyone puts their head down no discussion. I think everyone kinda felt their voice was heard, especially when you were doing examples on the board and everything (mentioned patience).

Kevin: Would you have felt comfortable contacting me yourself with problems

Michael: Yes, definitely, ye

Kevin: And can I ask how important was it to you, did it make a difference to you to have my mobile number?

Michael: Oh, that's a big difference, ye, especially when eh, when we handed up our final proposal and you gave us a breakdown in the text messages. That was, you know the sometimes you just get a result and you say (exclamation) where did all them marks come from. But the text message, it's very personalized as well like, you kind of, if you have a query then it's so easy to get back to you.

Kevin: Eh, can I ask you about an active learning community, you know, the use of the forums. Did you feel that an active learning community developed you know that there was groups got together to work on problems and things like that.

Michael: Ye, definitely, ye, even remember put up our proposals on Moodle and we all had to kind of criticise, give opinions, actually everybody kind of enjoyed that. It was good to see other peoples opinion on your idea, giving your opinion to someone else.

Kevin: How important was Moodle to you?

Michael: Very I think now, especially we're so used to everything is online and we're so used to clicking into something and, even when we're at home now like with our friends. You could be watching tv with, but you'd have your laptop and you'll be looking at something. It's just like second nature now especially doing your school work on it and your... you can actually go through your lectures, even when you wouldn't particularly set out to look at something college related you always click back into your Moodle page and you're looking over stuff and, just, and I think it's the way forward really (Kevin: Ye, it tis, ye are digital natives really...)

Comment [K199]: PP - Learners felt comfortable to ask questions and were satisfied with responses; 'You took lots of time and answered our Queries' (Michael)

Comment [K200]: PP - Everybody's voice was heard - suggesting communications in both directions; 'I think everyone kinda felt their voice was heard, especially when you were doing examples on the board and everything' (mentioned patience)

Comment [K201]: PP - felt could contact tutor if required

Comment [K202]: PP - Text messaging seems to be of great value to learners - 'But the text message, it's very personalized as well like, you kind of, if you have a query then it's so easy to get back to you'

Comment [K203]: PP - evidence of an active learning community; 'Ye, definitely, ye, even remember put up our proposals on Moodle and we all had to kind of criticise, give opinions, actually everybody kind of enjoyed that. It was good to see other peoples opinion on your idea, giving your opinion to someone else' (Michael)

Comment [K204]: G - Moodle was very important - Michael suggests that instant access to information is now part of the culture; 'It's just like second nature now especially doing your school work on it and your... you can actually go through your lectures, even when you wouldn't particularly set out to look at something college related you always click back into your Moodle page and you're looking over stuff and, just, and I think it's the way forward really' (Michael)

statistics and you know the podcasts because you needed to see how the thing was done, the steps... How did you find that?

James: Ye, the podcasts were good like eh, they were kinda simple uncomplicated ways a looking and learning... I suppose, I think that anyone that made use of them, had positive things to say about it like. (Kevin: Ye) but, but the other side of it, eh, you weren't being forced to use it so... you mightn't be using it so (Kevin: Ye, ye)

Comment [K215]: PP – James found podcasts useful 'Ye, the podcasts were good like eh, they were kinda simple uncomplicated ways a looking and learning... I suppose, I think that anyone that made use of them, had positive things to say about it like'

Kevin: And James, with regard to the assessment scheme, if you remember in the, in, for your thesis or for your thesis proposal, you had, it was broken up into where the marks were coming from for it, you know, did you, were you aware of that scheme, and did you think it was fair?

James: Ye, I looked at it ye, there was seven or eight different parts to it and 10 by, now we were all aware of that ye, and it's good to know that like you know, what area you should be putting more into...

Comment [K216]: PP - James felt assessment scheme was fair

Kevin: Did it help you with the development of your proposals?

James: Ye, you'd use it as a kind of a template like for your, for your proposal like

Comment [K217]: PP – (James) the assessment scheme was useful for developing the research proposal; 'you'd use it as a kind of a template like for your, for your proposal'

Kevin: Ye, ye I'm going to ask you now about something which you have mentioned already and that's the online environment, because you said you found it cluttered. How would you advise, how would you advise me now from a student's perspective on improving that?

James: Eh, well maybe not to put, I don't know you see, you covered so much like, it had to be there I suppose but eh, ... I suppose try and go through the most important things that have to be up there and focus on them maybe and add them as you're doing them. Don't have them all there the whole time like, maybe that way.

Comment [K218]: P – Hiding information on Moodle. (I think I will develop a scheme for highlighting current content)

Kevin: Ye, there's a facility for doing that, for hiding stuff, you know, and students I suppose could be encouraged to take down, to download the notes and stuff and then you could hide those.

James: When they're all up there, and there's four or five different articles for the same topic, you're like, I won't even bother looking at any of them, like you know, (Kevin: Ye, ye), whereas if there was one or two you might like you know (Kevin: Ye, because that did throw you a bit obviously when you went online...) Ye, ye

Comment [K219]: G – Moodle cluttered; 'When they're all up there, and there's four or five different articles for the same topic, you're like, I won't even bother looking at any of them, like you know, whereas if there was one or two you might like you know' (James)

Kevin: I am going to ask you about the next element now... I'm going to ask you about the concept of active leadership, and what I mean here is, eh, basically, I'm talking about myself ok, so it's probably a bit of an emotive question. What, if you felt there was active leadership, that there was somebody there you could approach, eh, that you had communications with, that showed leadership throughout the module?

James: Ye, eh, the module now, it was two subjects in one for the first semester like, and we had similar, eh, two subjects in one in other modules as well... it was a lot of work going on like, now, we all knew you (were) sound and good at your job and all that and we realized that, we thought it unfair that you had to do two modules and only a short period of time to cover them like. We all went along with it like but we always thought there was

Comment [K220]: P – James obviously had no problem with active leadership – he did feel tutor had too much work to do

Comment [KMH221]: G – This is telling?

James: Post Interview Impressions and Interview Transcript

Post Interview Impressions

James comes across as very laid back and one who didn't have worries about getting through the module. He gives the impression that he didn't engage with the module as thoughtfully as other interviewees. For example, he mentioned that where there were four or five readings on the one topic he felt like not bothering to look at any of them, he felt he might however, if there were just one or two. He also felt with reference to the audio feedback that it would have been important had he followed it up.

Interview Transcript and Coding

Kevin: The first thing I am going to ask you is about the module overview, if you can remember back to the first day; to the induction session. Do you think you got a reasonable module overview? Was it enough to help you gauge your progress or were there surprises came later?

James: Ye, it was big enough anyways eh, on Moodle? Are you talking about Moodle now? (Kevin: I'm talking about the presentation on the first day, we had a long presentation, and Moodle, you know, if you felt you had enough to work out what the module was all about and how much it contained.

James: Ye, well, we saw what it entailed alright and, I can't really remember now to be honest, the day in question I just, it's not really registered now. (Kevin: That's absolutely... absolutely no problem there, because)

Comment [K211]: PP - James felt module overview was sufficient for learners to: 'we saw what it entailed alright'

Kevin: When do you think... at what stage did you see the significance of the module to your dissertation?

James: Eh, from day one we knew, it's going to be, part of it is going to be the thesis, and the rest is the examinable part of it in December like... eh, I'm going to be honest here now, it was a bit sketchy like, some days we were coming in to do some thesis work earlier on, mostly that, and then we'd come in and do some stats and stuff (Kevin: Ye, ye) you know,

Comment [KMH212]: G - This was problem with all the learners. No clear demarcation between RM and stats when it came to time allocation

Kevin: I think a lot of students found that disjointed, (James: Ye, ye), the fact that they weren't... separated out (James: Ye)

Kevin: Can I ask you about the learning objectives, do you think that you, sort of clear and precise learning objectives were communicated to you with regard to the elements within the module.

James: Well, we were well informed on eh, what we had to prepare for our thesis, the research proposal and so on. Eh, we were also well informed about the, eh, what was required in stats as well so ah no, it was, that was straight forward ye. I found that the Moodle page was eh, very clustered at times and it went down. It was so long and when you just started looking at it like, oh, God, I don't want to read down the rest of it like (Kevin: Ye, ye). I think it was maybe too much in it (Kevin: Ye, ye).

Comment [K213]: PP - James feels learning objectives were clearly specified

Comment [KMH214]: G - Recurring theme from James

Kevin: Ye, that's fairly common comment that I have got you know eh. Can I ask you about instructions on achieving specific tasks, and I suppose that primarily is with the

statistics and you know the podcasts because you needed to see how the thing was done, the steps... How did you find that?

James: Ye, the podcasts were good like eh, they were kinda simple uncomplicated ways a looking and learning... I suppose, I think that anyone that made use of them, had positive things to say about it like. (Kevin: Ye) but, but the other side of it, eh, you weren't being forced to use it so... you mightn't be using it so (Kevin: Ye, ye)

Comment [K215]: PP – James found podcasts useful 'Ye, the podcasts were good like eh, they were kinda simple uncomplicated ways a looking and learning... I suppose, I think that anyone that made use of them, had positive things to say about it like'

Kevin: And James, with regard to the assessment scheme, if you remember in the, in, for your thesis or for your thesis proposal, you had, it was broken up into where the marks were coming from for it, you know, did you, were you aware of that scheme, and did you think it was fair?

James: Ye, I looked at it ye, there was seven or eight different parts to it and 10 by, now we were all aware of that ye, and it's good to know that like you know, what area you should be putting more into...

Comment [K216]: PP – James felt assessment scheme was fair

Kevin: Did it help you with the development of your proposals?

James: Ye, you'd use it as a kind of a template like for your, for your proposal like

Comment [K217]: PP – (James) the assessment scheme was useful for developing the research proposal; 'you'd use it as a kind of a template like for your, for your proposal'

Kevin: Ye, ye I'm going to ask you now about something which you have mentioned already and that's the online environment, because you said you found it cluttered. How would you advise, how would you advise me now from a student's perspective on improving that?

James: Eh, well maybe not to put, I don't know you see, you covered so much like, it had to be there I suppose but eh, ... I suppose try and go through the most important things that have to be up there and focus on them maybe and add them as you're doing them. Don't have them all there the whole time like, maybe that way.

Comment [K218]: F – Hiding information on Moodle. (I think I will develop a scheme for highlighting current content)

Kevin: Ye, there's a facility for doing that, for hiding stuff, you know, and students I suppose could be encouraged to take down, to download the notes and stuff and then you could hide those.

James: When they're all up there, and there's four or five different articles for the same topic, you're like, I won't even bother looking at any of them, like you know, (Kevin: Ye, ye), whereas if there was one or two you might like you know (Kevin: Ye, because that did throw you a bit obviously when you went online...) Ye, ye

Comment [K219]: G – Moodle cluttered; 'When they're all up there, and there's four or five different articles for the same topic, you're like, I won't even bother looking at any of them, like you know, whereas if there was one or two you might like you know' (James)

Kevin: I am going to ask you about the next element now... I'm going to ask you about the concept of active leadership, and what I mean here is, eh, basically, I'm talking about myself ok, so it's probably a bit of an emotive question. What, if you felt there was active leadership, that there was somebody there you could approach, eh, that you had communications with, that showed leadership throughout the module?

James: Ye, eh, the module now, it was two subjects in one for the first semester like, and we had similar, eh, two subjects in one in other modules as well... it was a lot of work going on like, now, we all knew you (were) sound and good at your job and all that and we realized that, we thought it unfair that you had to do two modules and only a short period of time to cover them like. We all went along with it like but we always thought there was

Comment [K220]: P – James obviously had no problem with active leadership – he did feel tutor had too much work to do

Comment [KMH221]: G – This is telling?

a better way of doing this. We weren't blaming the lecturer like. We thought it was the department should have it properly sown up like.

Kevin: Did, but... I perfectly understand that because the module was packed, way too much in it (James: Ye, ye), that's obvious. But did you feel that I was accessible to you, would you have felt comfortable in approaching me about a problem?

James: Ye, ye, well you were helpful with eh, research proposals and like, you've a lot on your plate like, a lot to be doing like and the eh, in class discussion about where we were at with our research proposals, that was all good like. (Kevin: Ye, I suppose you could classify that as kind of general feedback) Ye, I think the workload was too much like, you know, we'd get more out of it if the research proposal work was done on its own and the stats was done on it's own, you know.

Comment [K222]: PP - James felt I was helpful

Kevin: Ye, ye, well that's a good point for me to remember for the future. With regard to the communication, you know, did you find the likes of texting, that you could contact me by texting... I don't think you used it, did you?

James: Well, we received plenty of texts off you, you know, that's not something that other lecturers like, em, it is good, ye, it's a good way of being, getting up to date, and communicating what's going on. (Kevin: Ye, ye)

Comment [K223]: PP - James found texting useful; 'Well, we received plenty of texts off you, you know, that's not something that other lecturers like, em, it is good, ye, it's a good way of being, getting up to date, and communicating what's going on'

Kevin: Eh, with regard to an active learning community, now where I'm coming from here, how well did you feel the class gelled as a community of people who sort of helped one other... you know working in groups, you know, like with the stats and different things?

James: Well I suppose, there was probably a few groups formed, within the main group, you know, don't know, it's the same with everything I suppose, but eh, ye when it came close to exam time we were all helping each other out so ye, there was a good community overall.

Comment [K224]: PP - James perceived evidence of an active learning community

Kevin: It looked like there was a good community spirit there from somebody, a little on the outside, you know (James: No, there was, ye), as I would have been and look, I am just going to ask you two more questions. The first one is on feedback, you know like you mentioned general feedback, I think you, you seemed to be comfortable with that with regard to the thesis, you know how people are getting on and all. How about personal feedback and, you know with the like of the audio feedback where example, in the...

James: The audio was good.

Comment [K225]: PP - James felt the audio feedback was good

Kevin: How useful did you, was it adequate? Did you get adequate feedback...?

James: Eh, I did I suppose, ye, like I had to listen to it a few times, and pause it, and I'd write things down like, that kind of a way but...

Comment [K226]: P - James evidence of how the learners used the audio feedback; 'Eh, I did I suppose, ye, like I had to listen to it a few times, and pause it, and I'd write things down like, that kind of a way but...'

Kevin: Of course there was personal feedback with the presentations as well). Ye, no, the feedback was good, ye, but, eh. How important was it to you?

James: Eh, well it would have been important if I had followed it (Both laugh). If it was done right it was like it was, if I had done it it would have been perfect like. It didn't work out that way but eh, some of the feedback now was eh, like Ivan would be my supervisor

Comment [K227]: PP - James found the audio feedback was good 'well it would have been important if I had followed it'

and I would have got different feedback from him than I got off you, and that I got off Colm Kelleher, so that kind of... I don't know what you can do with that like (Kevin: That's a difficult one...). Ye

Kevin: can I ask you just finally, if throughout the module, and I'm talking about while engaging with the module, if there were any emotional experiences for you that would be noteworthy, like dreadful frustration or, you know, delight over getting something right...

- James: Em, well, with the research proposal like, eh, it is frustrating like you know, because it's a big part of the year, like and tis is no personal offence like or anything. I got feedback off you and the feedback I got then off Ivan was totally different like. You know, your wondering then who should I be listening to, Kevin or Ivan... Who's in a better position to tell me like (Kevin: Ye, ye). That was frustrating now like (Kevin: That's something needs to be addressed). At the time, I couldn't say it to either of ye, you know, I should have said to Ivan, well Kevin told me to do this way or vice versa. Maybe, maybe a meeting with the student, you and the supervisor, at the same time like (Kevin: Ye), you know just for everybody is on a level playing field.

Comment [K228]: F – Ensure this does not occur in future (opposing views from tutor and potential supervisor)

This is an issue for the course board

Kevin: Ye, ye, that's good to have for future years...)

James is thanked and interview concluded